

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G
PREVIOUS INVESTIGATION/REMEDATION REPORTS

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-1
SELECTED PAGES FROM PREVIOUS REPORTS

B. JUNE 1993 – parking garage and parking lot

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT by MAXIM

EXECUTIVE SUMMARY

- ▶ The subject property occupies approximately 0.25 acre of land and is located on the north side of West Huron Street in the City of Buffalo, County of Erie, New York.
- ▶ The subject property can generally be described as rectangular-shaped with frontage on West Huron Street. Nearly the entire parcel is occupied by the six story masonry/wood-framed garage facility. The facility (circa 1900) is presently operated as a public parking garage. The basement and floors one through four are currently used for parking. The fifth and sixth floors are not presently utilized.
- ▶ The roof of the facility is made up of a rubber-like membrane with built-up flashing materials. The painted surfaces on the roof and both ground-to-roof stairways are in fair to poor condition.
- ▶ Two 55-gallon, one 10-gallon and one "pump type" steel drums of unknown contents were observed on the sixth floor.
- ▶ Oil staining was observed on the wood flooring along with potential asbestos containing building material (ACM) pipe insulation on the fifth floor.
- ▶ Significant oil staining and residue were present on the concrete floor area surrounding fourth and third floor drains. In addition, significant residue was observed with in these two drains. Asphalt shingle-like and vinyl flooring cover apparent wood flooring on portions of the fourth and second floors, respectively.
- ▶ A large out-of-use heater boiler with potential ACM insulation was observed in the basement.
- ▶ Excluding typical parking lot staining, moderate oil staining was observed near the southwest overhead door entrance to the building (adjacent to an inaccessible interior room).
- ▶ The subject property is bordered to the north by an asphalt covered parking lot. The "Health Care Services" office building/property are immediately adjacent to the east (very little separation). Located south of the subject property (across West Huron Street) are a parking lot, the "Huron Hotel" building, an office and an attorney's office/parking lot. The subject property is bordered to the west by an automobile repair facility, "Seneca Copy Center" facility, "King's Court" restaurant and various offices. For purposes of this ESA, the term "adjoining property", as defined by the ASTM standard means properties that border or are contiguous or partially contiguous with the subject property or would be so but for a street, road or other public thoroughfare separating them.
- ▶ Historical records indicate that many tank removals have occurred at the subject property. However, it is not clear whether all UST's have been removed from the parcel. In addition, no indication regarding the presence or absence of leaked/spilled petroleum in the subsurface was listed. The records also indicate that the parcel adjacent to the west of the subject property historically was used as a gasoline station.
- ▶ It is the opinion of Maxim that the available information collected for this Phase I ESA revealed the presence of recognized environmental concerns in connection with the subject property. The specific concerns associated with the subject property include the possible presence of UST's and potential petroleum product-related contamination. Additional concerns with the subject property include are the possible presence of ACM and lead based paint (fair to poor condition) on/within the building. Radon gas infiltration may also exist within the building. The petroleum product-related concerns are summarized below.

Exterior Petroleum-Related Contamination

- o Subsurface contamination may be present due to:
 1. Possible UST leakage;
 2. Possible historic petroleum spillage at the subject property;
 3. Adjacent parcel (to the west) spill site listings and its former usage as a gasoline station; and,
 4. Current oil-like staining on the asphalt near the southwest garage door entrance of the building. This area was located adjacent to an inaccessible room of the ground floor of the building.
- o Lead contamination of the subsurface may also be present due to its historic use as an additive of gasoline.

Interior Petroleum Contamination

- o Oil-like staining/residue on the wood floors and in the vicinity of various floor drains within the building;
- o The presence of various sized steel drums of unknown contents within the building;

Although not an environmental concern, it should be noted that the significant quantity of pigeon droppings observed on the sixth floor may pose a health concern for future building usage in this area.

Recommendations

Based on the results of the foregoing assessment, it is recommended that a Phase II ESA be completed at the subject property. The scope-of-work should include a subsurface investigation and surficial/drum sampling plan. The Phase II ESA should also include ACM/lead based paint/radon gas surveys for two reasons: 1) renovation of the structure is planned; 2) Although limited, office space is presently being utilized within the building.

5.0 HISTORICAL INFORMATION

CITY OF BUFFALO PERMIT DEPARTMENT RECORDS		
PERMIT DATE	LISTED OWNER	DESCRIPTION
10/27/14	---	install water pressure tanks on roof
2/7/24	Huron Garage Co.	Alter public garage
12/15/58	Anne J. Weber	Alter masonry garage/car rental
7/23/63	75 West Huron St Inc.	Place/use 1,000-gal waste oil tank
9/28/65	"	Place/use 4,000-gal diesel tank
1/23/68	Hertz U-Drive It	place 550-gal gasoline tank
1/19/76	Huron Garage	Replace two gasoline pumps
11/10/80	75 West Huron St Inc.	Used car lot for car sales in conjunction w/existing vehicle rental service

The City of Buffalo Fire Prevention Department UST records were also researched. These records indicate the installation and removal of various sized UST's. These records also indicated the occurrence of tank leakage and spillage. These records are summarized in the table presented on the following page.

CITY OF BUFFALO FIRE PREVENTION RECORDS		
DATE	ACTION	DESCRIPTION
1931	Gasoline Tank Survey	1-7,000 gal, 1-1,000 gal & 2 unknown; Product supplied by Standard & Texaco
3/9/40	Survey	1-8,400 gal, 2-1,000 gal & 1-550 gal; contained gasoline/alcohol
1/3/55	Violation Notice	Mechanical ventilation for third floor grease pit and UST for waste oil required
7/17/63	Installation	Replacement of 1,000 gal waste oil UST
9/15/65	Installation Permit	Install 4,000 gal diesel (Drawing shows adjacent Sunoco station)
9/1/67	Inspection	500-gal gasoline UST should be replaced

CITY OF BUFFALO FIRE PREVENTION RECORDS		
DATE	ACTION	DESCRIPTION
1/23/68	Application	Install 550 gal gasoline UST ("Replacement of a Leaker")
3/8/74	Letter	Diesel fuel spill
2/6/80	Letter	2 abandoned UST's (1-1,000 gal/1-550 gal) must be removed/backfilled to grade
2/29/80	Letter	Bureau of Fire Prevention would consider closure in-place (fill w/concrete) of above tanks
10/2/80	Removal Record	1-1,000 gal & 1-550 gal UST's
11/12/85	Memo From Contractor	Removed 1-8,000 gal (unleaded gasoline), 1-4,000 gal (diesel fuel) & 1-1,000 gal (waste oil) UST's

The above records indicate that, although many tank removals have occurred at the subject property, it is not clear whether all UST's have been removed from the parcel. In addition, no indication regarding the presence or absence of leaked/spilled petroleum in the subsurface was listed. The records also indicate that the parcel adjacent to the west of the subject property historically was used as a gasoline station.

6.4 Underground And Above Ground Storage Tanks

No visible evidence of UST's or AST's such as fill pipes, vents, etc. was observed on the subject property. It should be noted that various sources indicate evidence of historic petroleum product storage in UST's at the subject property. Such petroleum products included gasoline, diesel fuel, waste oil and possibly alcohol. In addition, it is not clearly indicated in the available records whether all UST's have been removed from the parcel.

C. AUGUST 2001 –parking garage and parking lot
PHASE II ENVIRONMENTAL SITE INVESTIGATION REPORT by BENCHMARK

1.1 BACKGROUND

Benchmark Environmental Engineering & Science, PLLC (Benchmark) conducted a Phase II Environmental Site Investigation (ESI) for Mr. Peter J. Burke, Esq. for the property located at 75-77 West Huron Street, Buffalo, NY (commonly referred to as the Huron Street Garage). The subject property is comprised of an approximately 0.25 acre parcel containing an asphalt surface parking lot adjacent to a multi-level parking garage. The property is bounded on the north by an additional surface parking lot, to the east and west by commercial/office buildings and on the south by West Huron Street (Figure 1).

The Phase II ESI followed a 1993 Phase I Environmental Site Assessment (ESA) for the subject property prepared by Enasco, Inc. and a 1999 Phase I ESA prepared by Maxim Technologies. The Phase II ESI was designed to address potential environmental conditions identified in the 1999 ESA. Specifically, the 1999 ESA indicated that a number of underground storage tanks (USTs) had previously existed at the site, but that it was not possible to conclude whether all of the tanks had been removed. Therefore, the Phase II ESI consisted of two parts: an exterior UST/petroleum release investigation and a basement groundwater investigation. The exterior UST/petroleum release investigation involved excavation of test pits in the surface lot adjacent to the parking garage (i.e., the area of reported prior USTs) to investigate whether USTs and/or petroleum-impacted soils remained on the property. Test pits were selected over non-intrusive tank investigation measures, such as electromagnetic (EM) survey, due to the likely EM interference posed by a reinforced concrete pad that exists beneath the majority of the surface asphalt. Test

2.1 EXTERIOR UST PETROLEUM RELEASE INVESTIGATION

Although the 1999 ESA indicated the historic presence of underground storage tanks on the property, the specific locations of the USTs were not identified. Therefore, prior to initiating the test pit work Benchmark obtained copies of historic fire insurance (Sanborn) maps showing the subject property and surrounding parcels so as to better target the test pit locations. Sanborn maps were requested through Environmental Data Resources (EDR), Inc., which acquired assets of the Sanborn Map Company and its map archive in 1995. Sanborn map coverage was requested

for the subject parcel through submission of both address and direct (interactive map) site location information. EDR supplied Sanborn map coverage for the property and immediately surrounding parcels for the years 1889, 1899, 1925, 1951, 1981, and 1986. Copies of these are presented in Attachment 1.

None of the Sanborn maps identified USTs on the subject property with the exception of the 1951 map, which indicated three (3) USTs in the surface lot near the Huron Street entrance. Three (3) test pits were marked for excavation at these UST locations based on scaled measurements from the southwest corner of the parking garage. Three (3) additional test locations were marked for excavation within the remainder of the lot to spot check for additional, unmapped tanks and/or evidence of petroleum contamination (see Figure 2).

On July 28, 2001, a total of six test pits were excavated at the six target areas identified above. The test pits were excavated with a Komatsu PC150 excavator until subsurface conditions became consistent, which generally occurred at a depth of 4.0 to 5.8 fbs. Discrete grab samples were collected and described by a Benchmark geologist for subsurface soil type and composition; visible or olfactory evidence of contamination; and moisture conditions. During test pit soil characterization, soil samples were screened for volatile organic vapors with a photoionization detector (PID). The PID is capable of detecting the presence of contaminants that emit volatile organic compounds such as petroleum products and solvents. No olfactory and/or visual evidence of petroleum-impacted soil/fill material was identified at any of the six test pit locations. PID scans of excavated soil for the six test pit locations did not detect any volatile organic compounds exceeding background concentrations (i.e., 0.0 ppm).

At each test pit location, Poorly Sorted Sand with Silt and Fill was present. Groundwater was not encountered at any of the locations. The fill material consisted of generally fine grained and loose soil with mixtures of brick and concrete. Test pit excavation logs are presented in Attachment 2. A summary of the field observations (i.e., lithology, dimensions, PID scan results etc.) at each test pit location is presented in Table 1.

2.2 GROUNDWATER SAMPLE COLLECTION

One groundwater grab sample was collected from a groundwater drainage system located in the basement of the parking garage. Upon collection the sample was measured in the field for pH, temperature, specific conductance and turbidity. A summary of field measurements is presented in Table 3. A sample was also transferred to appropriate laboratory-supplied sample containers for analysis of NYSDEC STARS Memorandum VOCs by USEPA Method 8260. A discussion of groundwater sample analytical results is presented in Section 3.0 of this report.

3.1 EVALUATION OF SOIL SAMPLE ANALYTICAL RESULTS

Subsurface soil sample analytical results are summarized in Table 2. As indicated, only a limited number of VOCs were detected at trace concentrations, all of which are well below the TAGM 4046 Soil Cleanup Criteria. No SVOCs were detected in the sample.

3.2 EVALUATION OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

Groundwater sample analytical results are summarized in Table 3. For comparison purposes, analytical results are presented with corresponding NYSDEC Class "GA" ambient groundwater quality standards and guidance values as published in NYSDEC Division of Water Technical Operation and Guidance series (TOGS) 1.1.1 (June 1998). As indicated, no VOCs were detected in the groundwater sample.

4.0 CONCLUSIONS

The Phase II investigation undertaken by Benchmark at 75-77 West Huron Street did not indicate the presence of remaining underground storage tanks or evidence of significant petroleum contamination in the areas investigated. As discussed in Sections 3.1 and 3.2, detected compounds were limited to trace levels of petroleum VOCs in the soil/fill sample, which were present well below NYSDEC recommended soil cleanup objectives.

D. AUGUST 2001 –parking garage and parking lot
PHASE II INVESTIGATION REPORT by GZA

2.00 PURPOSE AND SCOPE OF WORK

The purpose of this Phase II ESA was to assess whether the historical operations have impacted Site soil and/or groundwater. To accomplish this, the following activities were done.

- Observed the completion of 10 soil probes done by GZA's subcontractor SLC Environmental Services. The probes were completed in the driveway/parking lot area of the Site.
- Collected soil samples at continuous intervals, which varied from approximately 12 to 20 feet below ground surface (bgs).
- Field screened collected soil samples, using an organic vapor meter (OVM) equipped with a photoionization detector (PID).
- Selected three soil samples for chemical analysis, which included volatile organic compounds (VOCs) via EPA Method 8260 STARS¹ and semi-volatile organic compounds (SVOCs) via EPA Method 8270 STARS.
- Selected three groundwater samples for chemical analysis which included VOCs via EPA Method 8260 STARS and SVOCs via EPA Method 8270 STARS.
- Prepared this report, which summarizes the data collected during this Phase II ESA.

5.00 SUBSURFACE CONDITIONS

5.10 SOILS

Subsurface conditions at the soil probe locations generally consisted of granular fill materials overlying apparent natural deposited sandy soils. The fill soils were generally found to extend from approximately one to four feet below ground surface (bgs). However, fill material was encountered to a depth of approximately seven feet at B-9. The fill soils generally consisted of fine to coarse sand with varying and lesser amounts of gravel, brick, concrete, slag and rubble. Apparent naturally occurring silty sand was found below the fill material at each location and extended the full depth drilled. Probes were done to depths of approximately 16 feet bgs, with the exception of B-12 which extended to 12 feet bgs and B-4 which was completed to 20 feet bgs.

5.20 GROUNDWATER

GZA completed temporary piezometers at B-1, B-4 and B-7. In general, groundwater was encountered at approximately 8 to 9 feet bgs in the southern portion of the Site and from 10 to 12 feet bgs in the northern portion of the Site.

7.00 CONCLUSIONS AND RECOMMENDATIONS

A summary of our findings based upon the work conducted as part of this study follows.

- Subsurface conditions at the soil probe locations generally consisted of granular sandy fill soils, overlying apparent naturally occurring silty sand. The sandy soils were generally found to depths of around one to seven feet bgs. The borings were extended to depths ranging from 12 to 20 feet bgs.
- Groundwater was encountered at each boring and ranged in depth from approximately 8 to 12 feet bgs. In general, groundwater was found at shallower depth (approximately 8 to 9 feet) in the southern portion of the Site and deeper depths (approximately 10 to 12 feet) in the northern portion.
- Seven VOCs from B-2 (9.2 to 12 feet) and six VOCs from B-6 (14.5 to 16 feet) were detected at concentrations above its respective TAGM 4046 RSCO. These samples were collected in the saturated soil zone. No VOCs were detected above method detection limits from B-4 (4 to 8 feet), which was collected from the unsaturated soil zone. Additionally, no SVOCs were detected in the three soil samples analyzed, at concentrations above their respective TAGM 4046 RSCO.
- Analytical results identified VOCs in two (B-1 and B-4) of the three groundwater samples analyzed. Twelve VOCs were detected in B-1 and eleven were detected in B-4 at concentrations that exceeded their NYSDEC Class GA groundwater criteria. Naphthalene was the only SVOC detected at these two locations at concentrations above the groundwater criteria. No VOCs or SVOCs were detected above the method detection limits in the groundwater sample from B-7.

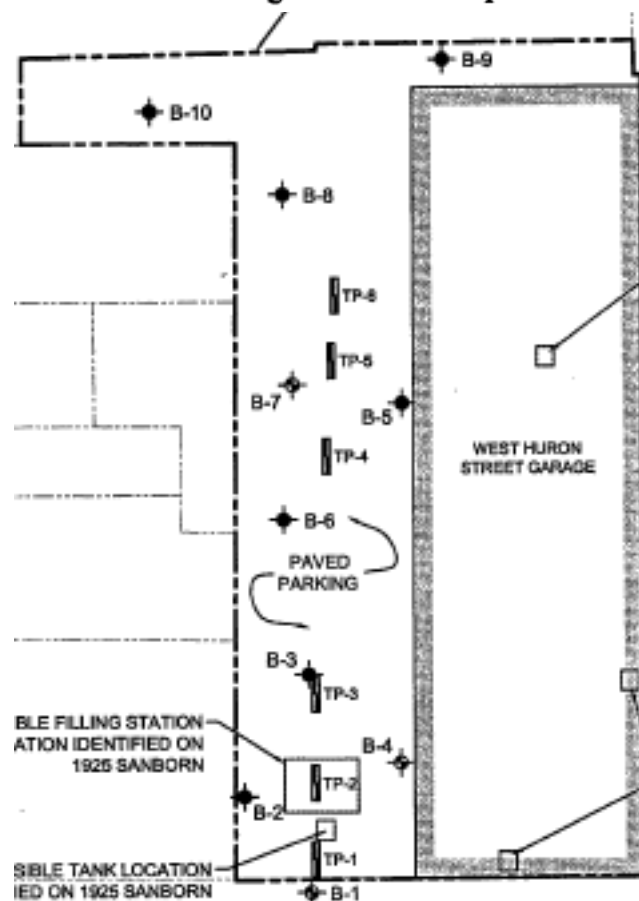


Table 2
Soil Analytical Testing Results Summary
Parking Garage
75 - 77 West Huron
Buffalo, New York

Parameter	NYSDEC TAGM 4046 RSCO	B-2 9.5 to 12 feet bgs	B-4 4 to 8 feet bgs	B-6 14.5 to 16 feet bgs
Volatil Organic Compounds - EPA Method 8260 STARS (ug/kg)				
Toluene	1,500	36,000		950
Ethylbenzene	5,500	20,000		210
m,p-Xylene	1,200	81,000		12,000
o-Xylene	1,200	31,000		660
Isopropylbenzene	5,000	3,900		10,000
n-Propylbenzene	14,000	12,000		34,000
1,3,5-Trimethylbenzene	3,300	22,000		49,000
1,2,4-Trimethylbenzene	13,000	66,000		190,000
sec-Butylbenzene	25,000	1,700		970
p-Isopropyltoluene	11,000	2,000		4,100
n-Butylbenzene	18,000			34,000
Naphthalene	13,000	19,000		
Total VOCs		294,600		335,690
Semi-Volatile Organic Compounds - EPA Method 8270 STARS (ug/kg)				
Naphthalene	13,000	12,000		5,700
2-Methylnaphthalene	36,400	13,000		15,000
Notes:				
1. Compounds detected in one or more samples are presented on this table. Refer to Attachment C for list of all compounds included in analysis.				
2. Analytical testing completed by GZA GeoEnvironmental Laboratory.				
3. Recommended Soil cleanup objectives (RSCOs) based on the NYSDEC TAGM 4046 Determination of Soil Cleanup Levels dated January 1994.				
4. ug/kg = part per billion (ppb) a				
5. Blank indicates compound was not detected.				
6. NT = not tested				
7. SB = Site Background				
8. NV = no value				
9. MDL = method detection limit				

Table 3
Groundwater Analytical Testing Results Summary
Parking Garage
75 - 77 West Huron
Buffalo, New York

Parameter	Class GA Criteria	B-1	B-4	B-7
Volatil Organic Compounds - EPA Method 8260 STARS (ug/L)				
Benzene	1	21		
Toluene	5	290	23	
Ethylbenzene	5	400	180	
m&p-Xylene	5	90	860	
o-Xylene	5	120	240	
Isopropylbenzene	5	43	48	
N-propylbenzene	5	75	180	
1,3,5-Trimethylbenzene	5	69	280	
1,2,4-Trimethylbenzene	5	96	1200	
sec-Butylbenzene	5	5	16	
p-Isopropyltoluene	5	8.4	41	
Naphthalene	10	190	200	
Total VOCs		1407	3268	
Semi-Volatile Organic Compounds - EPA Method 8270 STARS (ug/L)				
Naphthalene	10	120	130	
2-Methylnaphthalene	NV	28	300	
Acenaphthene	NV		0.24 J	
Fluorene	NV		1.1 J	
Phenanthrene	NV		1.1 J	

E. APRIL 2007 –parking garage
BASEMENT INVESTIGATION REPORT by IYER ENVIRONMENTAL

BACKGROUND

The Huron Street building is located in downtown Buffalo, NY, just east of Delaware Avenue on the north side of Huron Street. An auto repair shop is located on the northeast corner of Delaware Ave and Huron Street, had leaking USTs (west of the building) that required remediation. has been undergoing environmental remediation due to petroleum contamination. Phase I and Phase II investigations were conducted between 1993 and 2003 for this property.

In January 2007, GES conducted an indoor air sampling and analysis for volatile organics. Several VOCs were detected in the air samples (three in the building basement, and one immediately outside the building. In its report dated March 15, 2007, GES concluded that there is no air contamination as a result of petroleum products. However, several people entering the building continue to report the presence of a strong petroleum-like odor in the basement of the building. IEG was therefore asked by Knoer, Crawford & Bender, LLP to investigate the basement further.

ACTIVITY

Entrance was gained through an overhead door at the southeast corner of the building. There is a ramp going up to the First Floor straight ahead of the overhead door. It is in serious disrepair with two large holes in it. Immediately to the left of the Upper Ramp is the Lower Ramp leading to the Basement. The Basement was damp with water flowing through three drain trenches as shown on Figure 1. The northern section of the basement had a mild odor typical of a combined sewer. A strong petroleum odor was noticeable at the south end of the Basement. There is continuous flow from the north drain into the sump, while the drains in the south section appear to be stagnant.

IEG screened the air and water in the three sumps for volatile organics using a photoionization detector (PID). Each water sample was collected in a tall, one-liter plastic bottle to half its volume and allowed to sit for approximately five minutes after which the head space was screened with the PID. The water samples were also tested in the field for pH, Temperature and Specific Conductivity.

The field measurements indicate the presence of petroleum-related VOCs in the basement, contrary to the conclusions made by GES from the air sampling. Groundwater contamination by petroleum products (based on monitoring wells) has been reported to be most predominant on the auto service property outside the southwest corner of the building. The basement's south section is immediately adjacent to this area of groundwater contamination which is most likely entering the basement, and as it stagnates, creates the persistent petroleum odor in the basement's south section.

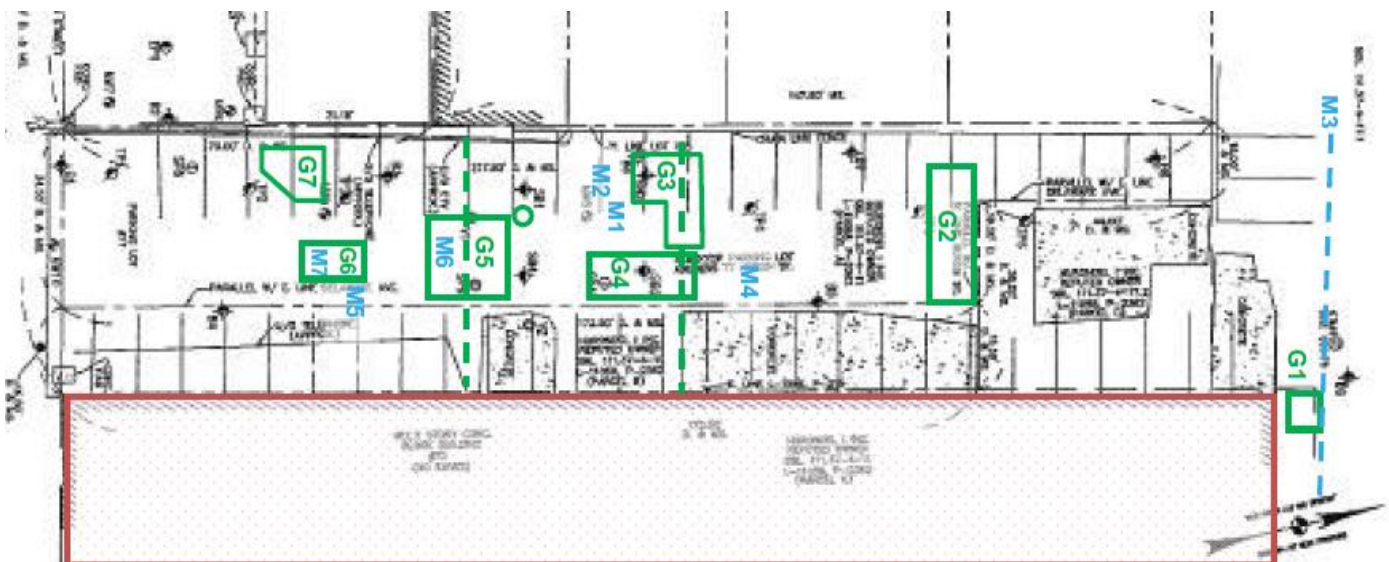
F. OCTOBER 2011 –parking lot **GPR SURVEY by IYER ENVIRONMENTAL**

A. GPR SURVEY at 77 WEST HURON

On September 23, 2011, Pegasus (Spencerport, NY) used a GPR with a 400 MHz antenna to scan an L-shaped area, extending from the 77 West Huron parking lot to the parking area north of the 75 West Huron building (see Figure 1). The method used is a “line scan,” where random transects are scanned to pick up subsurface anomalies and disturbances. The GPR survey was supplemented with a scan of the area by a Schonstedt metal detector. The GPR survey report, with images, anomalies and descriptions, from Pegasus are attached. The attached photo pages show areas of anomalies and disturbances marked in the field.

Figure 2 delineates and describes areas where the GPR and metal detector indicated subsurface anomalies. Most of these areas appear to be disturbed geology, including soil excavation and backfilling, and two small areas (G6 and G7) indicated possible UST, albeit at a shallower depth. None of these areas exhibited a GPR profile matching that of a UST (see example attached). It should be noted that the southern half of the parking lot has had several disturbances over the years, from test pits in 2001 to AS/SVE wells and trenches in 2007. Based on the GPR and metal detector survey, it appears unlikely that USTs may be present in the 77 West Huron parking lot. The following summarizes the findings of the GPR and metal detector survey:

- Anomalies were observed in seven (7) GPR and seven (7) metal detector areas (see Figure 1)
- GPR areas G1 through G5 appear to be from disturbed geology, excavations, backfill
- G6 (at 2001 test pit TP3) is highly suspect but GPR profile is not similar to that of a typical UST
- G7, just west of Auto Service building is also highly suspect, with possible UST or pipe. A 1951 Sanborn Map (attached as Figure 4) indicates “Gas ST” at this location. However, the GPR profile at this location also does not match that of a typical UST.



G. FEBRUARY 2013 –parking lot
GEOPROBE SOIL INVESTIGATION by IYER ENVIRONMENTAL

1.0 INTRODUCTION AND PURPOSE

Iyer Environmental Group PLLC (IEG) was retained by Hurondel LLC (Hurondel) to complete a Geoprobe Soil Investigation as a follow up to an October 2011 GPR survey, and questions about the possible presence of old UST(s) and/or source of petroleum contamination within the 77 W. Huron property. This report details field activities, laboratory analysis and results associated with this investigation. The purpose of this soil investigation is to further assess recognized environmental conditions, to determine the nature and extent of contamination, and to provide clear guidance on any remediation necessary. This investigation included the collection of subsurface soil samples for VOC/SVOC analysis from across the site (see Figures 1 and 2, and survey map in Attachment B) and a survey of all sample locations.

4.2.1 Geoprobe Soil Samples

Sampling: On Aug 14 and 16, 2012, soil borings using the Geoprobe were completed at sixteen (17) locations on the site (samples GP-1 through GP-17 on Figure 2). Continuous soil samples were collected in four-foot intervals to depths up to 24 feet or refusal, whichever came first. The soil borings were photographed, screened with a PID meter for VOCs, and sampled as appropriate. Table 1 shows a summary of the sampling and analysis along with field observations. The samples were analyzed for STARS VOCs and STARS SVOCs based on a combination of factors - field observations, PID readings and locations. Descriptions of the soil boring samples are included in Table 2. Analytical results for those samples so tested are tabulated in Table 3. Total VOCs and associated sample elevations are shown on Figure 3 along with groundwater elevations from 9/8/11 at monitoring wells in the vicinity.

Analytical Results: Fourteen (14) of the seventeen (17) samples sent to the lab were selected for VOC analysis based on field PID readings. Up to thirteen (13) VOC compounds were found in the samples analyzed. Soil sample locations are shaded in Figure 3 according to the relative levels of total VOCs. GP-14 located in the southern section of the lot near MW-9, posted by far the highest total VOC concentration (857 mg/Kg) at a depth of 13' below ground surface (bgs; relative elevation of 88.5'). At this location, total VOCs were orders of magnitude lower at depths of 11' and 16' bgs. GP-15, near MW-9 and MW-14, had the next highest total VOC concentration (576 mg/Kg) at 13' bgs. GP-16, located in the southern end near MW-6, posted the third highest (315 mg/Kg) at 13' bgs. GP-5, GP-6 and GP-8 near the middle of the lot posted elevated total VOC levels, although these were much lower than the previous three. Total VOCs for the other five samples were between 0.005 and 0.4 mg/Kg.

4.3 Data Assessment

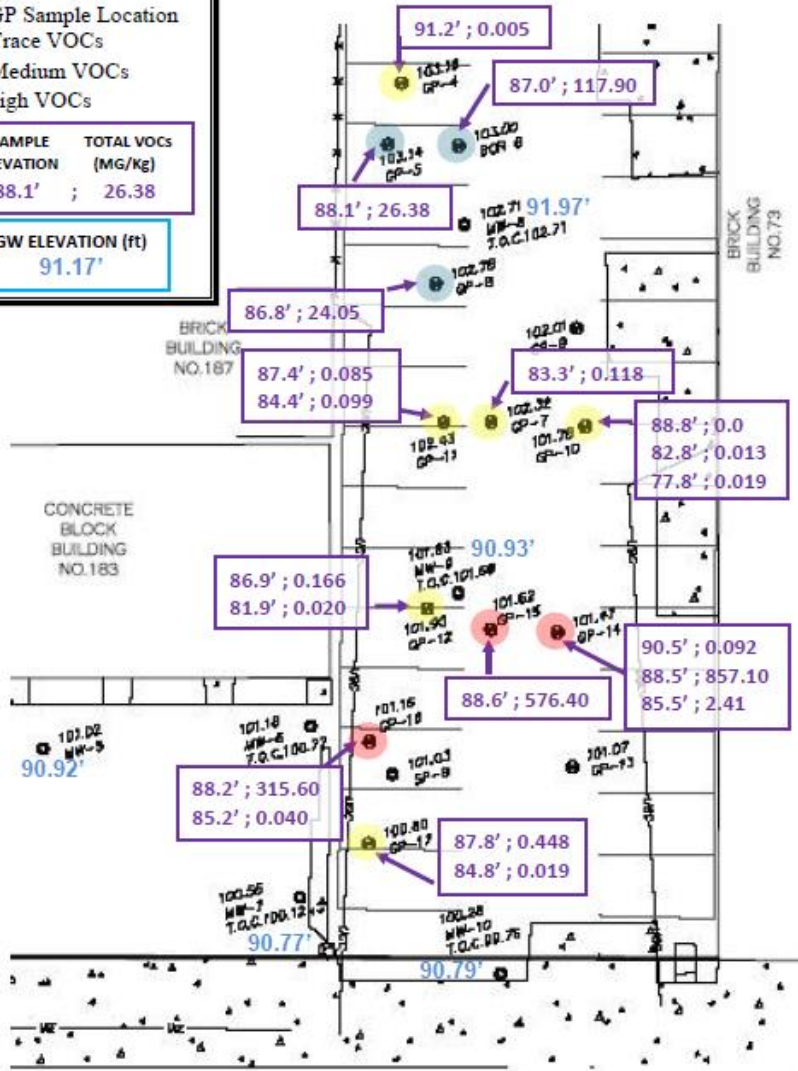
VOC Contamination: Elevated PID readings and VOC contamination associated with gasoline was found in the subsurface soil in the southern half of the W. Huron St. parking lot. The contamination was found mostly at depths greater than 11' bgs (elevation less than 90'), and below the groundwater table. According to data from 9/8/11 in Sunoco's August 29, 2012, 2nd Quarter 2012 Site Status Report, groundwater was at elevation 90.84' at MW-6, 90.77' at MW-7, 91.17' at MW-8 and 90.93' at MW-9. The data for 12/1/11, 3/26/12 and 6/25/12 in Sunoco's report indicate higher groundwater levels with slight variations at MW-6 (91.50' – 91.71') and MW-7 (91.44' – 91.64') which are located on the Sunoco side of the southern property boundary with 77 W. Huron (no measurements were taken at MW-8, MW-9 and MW-10 during this data period).

LEGEND

- GP Sample Location
- Trace VOCs
- Medium VOCs
- High VOCs

SAMPLE ELEVATION	TOTAL VOCs (MG/Kg)
88.1'	26.38

GW ELEVATION (ft)
91.17'



Note: Soil samples from 8/14&16/12 by IEG; GW level data from 9/8/11 by Sunoco

**77 W HURON STREET
SOIL VOC CONCENTRATIONS**

FIGURE 3

IEG

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-2
1993 Phase I ESA (ENASCO)



100 Leslie Street • Buffalo, NY 14211
(716) 893-0532

LEVEL I
ENVIRONMENTAL ASSESSMENT REPORT
75 WEST HURON STREET
BUFFALO, NEW YORK

PREPARED FOR:
MR. PETER BURKE
ATTORNEY AT LAW
438 MAIN STREET
BUFFALO, NEW YORK 14202

SUBMITTED BY: Brian M. Demme
Brian M. Demme, REPA
Assessment Specialist

REVIEWED BY: John T. Curtis
John T. Curtis, REP, REPA
Environmental Chemist

DATE: June 28, 1993

A1101

THIS AUDIT HAS BEEN CONDUCTED FOR THE BENEFIT OF THE ABOVE REFERENCED PARTY. AND THE RESULTS AND
RECOMMENDATIONS PRESENTED HEREIN MAY BE RELIED UPON ONLY BY THE ABOVE REFERENCED PARTY. ASSIGNMENT
OF THIS DOCUMENT CAN ONLY BE MADE WITH THE PERMISSION OF ENASCO, INC.

1.0 INTRODUCTION

This report describes the visit of Mr. Brian M. Demme on June 12, 1993. The purpose of this visit was to evaluate the environmental risks at a property located at 75 West Huron Street in the City of Buffalo. The parcel was inspected for the presence of Asbestos, PCB'S, Underground and Aboveground Storage tanks as well as for the general presence and use of chemicals. Present during the inspection was Mr. Peter Burke, co owner of the subject property.

In conjunction with this on-site inspection, various government agencies were contacted to see if the site was identified as a known hazardous waste site. An accurate survey map was provided for our review to assess detailed site characteristics. The Abstract of Title was provided for our review to assess all past ownerships. Adjacent properties were also checked against government listings as well for possible contamination concerns.

2.0 ASSESSMENT SUMMARY

ENVIRONMENTAL LIABILITY:

- N/Suspect
- Suspect
- Confirmed

TYPES OF LIABILITY:

- Asbestos
- Hazardous/Toxic Contamination
- Petroleum
- Other
- Tank

FURTHER INVESTIGATION/ACTION:

() N/Recommended (X) Recommended

3.0 OPINION OF RISK

In light of the findings and information available as documented within this report, it is the opinion of Enasco, Inc. that this site carries a low probability of environmental risk.

4.0 GENERAL SITE FINDINGS

4.1 PROPERTY

Parcel "A"

Beginning at a point in the northerly line of Huron Street, where it is intersected by the westerly line of said Inner Lot Number (128), one hundred fifteen and five tenths (115.5) feet easterly from the intersection of the said northerly line of Huron Street with the easterly line of Delaware Avenue; thence running easterly on said line of Huron Street thirty four and five tenths (34.5) feet; thence running northerly parallel with the westerly line of Delaware Avenue, one hundred seventy three and five tenths (173.5) feet; thence running westerly nineteen and five tenths (19.5) feet parallel with the said northerly line of Huron Street; thence running northerly parallel with said westerly line of Delaware Avenue forty four (44) feet; thence running westerly to the westerly line of said Inner Lot Number (128), fifteen

(15) feet; thence running southerly along the westerly of said Inner Lot Number (128), two hundred seventeen and five tenths (217.5) feet to the place of the beginning.

This parcel is situated in the City of Buffalo, County of Erie and State of New York. It is further distinguished as being part of Inner Lot Number one twenty eight (128).

Parcel "B"

Beginning at a point in the northerly line of Huron Street, thirty four and five tenths (34.5) feet easterly from the southwest corner of Inner Lot Number (128), measured along said northerly line of Huron Street; running thence easterly along said northerly line of Huron Street sixteen and five tenths (16.5) feet to the easterly line of the premises conveyed; thence running northerly along said easterly line of land so conveyed one hundred seventy three and fifty hundredths (173.50) feet; thence running westerly parallel with said northerly line of Huron Street sixteen and one half (16-1/2) feet; thence running southerly parallel with said westerly line of Inner Lot Number (128), one hundred seventy three and fifty hundredths (173.50) feet to the northerly line of Huron Street at the place of the beginning.

This parcel is situated in the City of Buffalo, County of Erie and State of New York. It is further distinguished as being part of Inner Lot Number one twenty eight (128).

Parcel "C"

Beginning in the northerly line of Huron Street one hundred fifteen and one half (115-1/2) feet westerly from its intersection with the westerly line of Franklin Street; thence running westerly along said line of Huron Street sixty five and two tenths (65.02) feet; thence at right angles northerly and parallel with Franklin Street two hundred thirty seven and three hundredths (237.03) feet; thence at right angles easterly sixty five and thirty seven hundredths (65.37) feet and thence at right angles southerly two hundred thirty six and ninety one hundredths (236.91) feet to Huron Street at the place of the beginning.

This parcel is situated in the City of Buffalo, County of Erie and State of New York. It is further distinguished as being part of Inner Lot Number one twenty eight (128) of the Holland Land Company's Survey.

Parcel "D"

Commencing at a point fifteen (15) feet easterly on the westerly line of Inner Lot Number (128) as measured on a line parallel to Huron Street and two hundred seventeen and fifty hundredths (217.50) feet northerly of the northerly line of Huron Street; thence southerly on a line parallel to Delaware Avenue and fifteen (15) feet easterly of the westerly line of Inner Lot Number (128) for a distance of forty four (44) feet; thence easterly on a line parallel to Huron Street eighteen (18) feet; thence northerly on a line parallel to Delaware Avenue forty four (44) feet; thence westerly on a line parallel to Huron Street eighteen (18) feet to the place of the beginning.

Parcel "E"

Beginning at a point in the northeast corner of lands conveyed, thence running southerly on a line parallel with Delaware Avenue and along the east line of lands conveyed to E. Alan Nordstrom forty four (44) feet to a point one hundred seventy three and fifty hundredths (173.50) feet north of Huron Street, measured along a line parallel with Delaware Avenue being the north line of lands conveyed to Buffalo Lodge Number 23, Benevolent & Protective Order of Elks; thence running easterly along the north line of lands conveyed to the Buffalo Lodge number 23 Benevolent & Protective Order of Elks eighteen (18) feet; thence running northerly along the west line of land conveyed to Charles Miller forty four (44) feet; thence running westerly parallel with Huron Street eighteen (18) feet to the point or place of the beginning.

4.2 STRUCTURES

The subject parcel of interest contains one (1) structure. A six (6) story brick structure with a basement. This parcel is utilized for automobile parking and office space. According to Mr. Burke this structure is approximately 97 years old.

4.3 ASBESTOS

Asbestos is defined as a liability when the composition and condition of the suspect asbestos containing materials are likely to result in the release of fibers under normal

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facility operations. Suspected asbestos containing materials were observed during the on-site inspection.

Twelve (12) inch vinyl floor tiles were observed in the fourth floor office space. These materials and the presumed underlying mastic are suspect to contain asbestos, and were observed in good condition and sampling is not recommended at this time. However, if these materials are to be disturbed in the future, a recommended and prudent risk management task would be to have the materials sampled and analyzed by a qualified professional environmental firm to determine asbestos content (if any) and proper handling and disposal contingencies, if necessary.

Due to the apparent age of the structure, asbestos may have been added to cement products used in the construction of the structure involved in this assessment to enhance strength. Fibers in asbestos cement are usually firmly bonded in the cement and will be released only if the materials are mechanically damaged. Therefore, if any disturbance (drilling, cutting, sanding or demolition) of cement products is to occur in this structure a prudent risk management task would be to have the materials sampled and analyzed by a qualified professional environmental firm to determine asbestos content (if any) and proper handling and disposal contingencies, if necessary.

4.4 PCB'S

Ballasts associated with the fluorescent lighting within the structure are suspected to be PCB containing. Sampling

and/or further investigation into this matter is not recommended at this time. However, if the ballasts are to be disturbed in the future, a recommended and prudent risk management task would be to have the materials sampled and analyzed by a qualified professional environmental firm to determine asbestos content (if any) and proper handling and disposal contingencies, if necessary.

4.5 ABOVEGROUND STORAGE TANKS

Observed. Two (2) two hundred seventy five (275) gallon aboveground storage tanks were observed on the first floor. These tanks were observed to be possibly empty and in good condition with no apparent leakage. These tanks are currently not in service according to Mr. Burke.

4.6 UNDERGROUND STORAGE TANKS

No visual indicators observed. Mr. John Otto of the New York State Department of Environmental Conservation was contacted regarding underground storage tanks at the parcel. According to his files there are are no records for this parcel regarding underground storage tanks.

4.7 GROUND CONDITIONS

The subject parcel was observed to be generally level. Portions of the subject property unoccupied by this structure are either asphalt paved parking lots or gravel. These features are noted with no apparent environmental concerns. No standing water was observed on the parcel. Discolored or

odorous liquids were not observed flowing, standing or ponded. No unusual odors were sensed from any source in the area. No stressed or dead vegetation or unusual changes in topography were observed. The general housekeeping practices on the site were observed to be of no apparent environmental concerns. The subject parcel accesses public water and sewers.

4.8 ON SITE CHEMICALS

Ten (10) empty 55 gallon metal drums labeled "Zep" were observed on the fifth floor. These containers were observed to be in good condition with no apparent signs of leakage.

4.9 IMMEDIATE ADJOINING PROPERTIES

The present activities at the adjoining properties are as follows:

- NORTH Seneca Blue Print Offices
- SOUTH New York State Labor Office
Law Office & Hotel Huron
- WEST Precision Tune Automotive
- EAST Staff Builders

With respect to the subject's property westerly neighbor, it should be noted that automobile repair shops can have pollution exposures arising from but not limited to, the presence of waste oil, waste anti-freeze, underground storage

tanks which contain various petroleum products, automatic transmission fluids, power brake and steering fluids, battery acids and lead from batteries. Waste oils and fluids may be dumped and handled carelessly. A relatively small spill or leak (if in fact one has occurred) can contaminate large quantities of groundwater and or surface water at considerable distances from the site. Furthermore, many operations such as these may have underground storage tanks associated with their operations. If in fact underground storage tanks are present and their structural integrity failed or does fail the potential for contaminates migrating onto the subject parcel would exist.

A brief walk by visual inspection of the immediately adjoining properties revealed no misuse or poor handling of materials. These type of adjoining activities are not of a type generally associated with hazardous generation.

4.10 AERIAL PHOTOGRAPH REVIEW

Available aerial photographs from 1938, 1951, 1958, 1966, 1978 and 1985 were reviewed at the Erie County Soil Conservation Service Office in East Aurora.

In none of the photograph's reviewed were there any indications to suggest that materials had been buried on the subject parcel.

4.11 DEVELOPMENT DECISION SUPPORT SYSTEM (DDSS) FINDINGS

Information was obtained from the Development Decision

Support System (DDSS) as supplied by the Erie County Department of Environment and Planning.

It must be noted that information supplied from this service is not site specific but refers to the general conditions within the one (1) kilometer grid area in which the subject parcel is a portion of.

A brief overview of information obtained indicates the areas primary land use to be commercial with a secondary land use of transportation, public communications. DDSS indicates an absence of known wetlands and floodplains in the area. DDSS considers there to be no prime agricultural soil in the area. DDSS further indicates no significant wildlife habitat in the area. A absence of solid waste sites is noted along with the area being 100% sewer districted. DDSS indicates a moderate potential for overland flow to nearby drainageways with a moderate potential for pollution to the regional water table. DDSS indicates the presence of known archaeological sites is noted.

A copy of the original computer print out (as supplied by the Erie County Department of Environmental and Planning) and a completed DDSS worksheet is included within Appendix A of this submission.

5.0 RESEARCH FINDINGS - GOVERNMENT AGENCIES

5.1 75 WEST HURON STREET - BUFFALO, NEW YORK

National Priority List

Listed () Unlisted (X)

CERCLIS List	Listed ()	Unlisted (X)
NYS Inactive Hazardous Waste Site	Listed ()	Unlisted (X)

Mr. Charles Kollatz of the New York State Department of Environmental Conservation (NYSDEC) was contacted in regards to any current environmental violations on this property as per the letter in Appendix A. As of the date of this report, Enasco, Inc. has received limited response.

Any future responses will be forwarded. It should be noted that any future correspondence received may impact and alter the opinions and recommendations contained in this report.

In effort to obtain a better understanding of past occupants of the subject parcel the available Polk City Directories were reviewed at the Historical Society Library of Buffalo.

75 WEST HURON STREET

1933-89	Huron Street Garage
1933-88	Huron Auto Rental & U-Drive-It Corp
1933-60	Cyphers Card Co
1933-60	Cyphers Incubator Co
1984-85	Hertz Rent A Car & Truck
1990-92	All Right Garage
1989-present	Burke Associates Real Estate
1993	Empark

This list was reviewed with no apparent environmental concerns.

In addition, the available Sanborn Fire Insurance Map (Volume 1, Sheet 34 1925 with a 1956 update) was reviewed at the Research Library of the Buffalo and Erie County Historical Society. This map was viewed with no apparent environmental concern.

The New York State Department of Environmental Conservation Spill Files for Erie County was consulted. And it was determined that there are no records relative to the subject parcel.

During the review of this map, it should be noted that three (3) gasoline tanks were observed along the western section of the adjoining parcel.

5.2 ADJOINING PROPERTIES

National Priority List	Listed ()	Unlisted (X)
CERCLIS List	Listed (X)	Unlisted ()
NYS Inactive Hazardous Waste Site	Listed ()	Unlisted (X)

In order to identify potential sources of contamination, the National Priorities List, USEPA's CERCLIS List, NYS Inactive Hazardous Waste Site List, and the Erie County Department of Environment and Planning's Solid Waste Disposal Site Map and Index were consulted. For the purposes of this report, sites listed within an approximately one (1) mile radius of the subject parcel were noted.

JUN 25 99 10:38A TOM BURKE 843-342-3444 P.10

The National Priorities List was consulted and it was determined that there are no sites contained on this list within a one (1) mile radius of the subject parcel.

The USEPA's CERCLIS List was consulted and it was determined that there are three (3) sites on this list that are within an approximate one (1) mile radius of the subject parcel. Specifically:

NYD980508220 Erie Basin Marina, Erie St
NYD002114755 Buffalo Forge Co, Plant #1, 490 Broadway
NYD982182529 Russo Chevrolet, 198 Oak St

The NYS Inactive Hazardous Waste Site List was consulted and it was determined that there are no inactive hazardous waste sites on this list that are within an approximate one (1) mile radius of the subject parcel.

The Erie County Department of Environment and Planning's Solid Waste Disposal Site Map and Index were consulted, and it was determined that there is (1) waste site that appears on this map within an approximate one (1) mile radius of the subject parcel.

National Fuel Gas (Site Code # 559) located at West Genesee Street. Indications are that industrial wastes were disposed of at this site.

Copies of entries for sites referenced in this section as they appear in their respective registries, reports or maps/indexes are included as part of Appendix A.

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6.0 SEARCH AND SURVEY REVIEW/INTERVIEWS

The Abstract of Title for this parcel was provided for our review. A review of this document indicated past ownerships to include but not limited to, Wilhem Willink, Solomon Ginsburg, Buffalo Lodge Number 23, Benevolent and Huron Parking Services. These and other who appear are viewed with no apparent environmental concerns.

According to Mr Burke the parcel was once utilized by a livery around the 1920's. The two (2) aboveground storage tanks according to Mr. Burke were utilized by Hertz Auto Rental.

7.0 RECOMMENDATIONS

As discussed within Section 4.5, it is recommended that the two (2) aboveground storage tanks located on the first floor should be removed, prior to any financial transactions if these tanks are no longer in service.

As discussed within Section 4.8, it is recommended that the ten (10) 55 gallon drums should be removed in a sound environmental manner from the subject property along with any of their contents prior to any financial transactions.

8.0 DECLARATION

This report is only a Level One (1) or preliminary assessment and other tests or further investigations are available and may be necessary to identify the presence of environmental risks on site. The purpose of this report is to assist the customer in their evaluation of environmental risks. The customer will bear full responsibility for deciding at what level of testing and inspecting to base their investment decisions.

9.0 CERTIFICATION

I hereby certify that I have examined the information and data obtained during this investigation of the subject property, and being familiar with the results of the preliminary environmental assessment, attest that this Level I Report has been prepared in accordance with sound environmental auditing practices.

Submitted By: Brian M. Demme

Brian M. Demme, Registered Environmental Property Assessor, Assessment Specialist, Enasco, Inc

Reviewed By: John T. Curtis

John T. Curtis, Registered Environmental Professional, Registered Environmental Property Assessor, Assessment Specialist, Enasco, Inc

SEAL:

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-3
1999 Phase I ESA (Maxim)

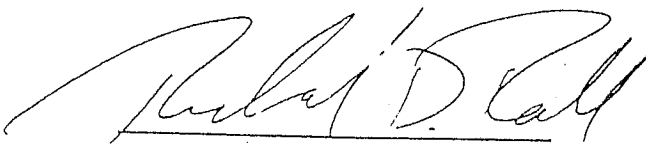
PHASE I
ENVIRONMENTAL SITE ASSESSMENT
PARKING GARAGE
75-77 WEST HURON STREET
BUFFALO, NEW YORK 14202

Prepared for:

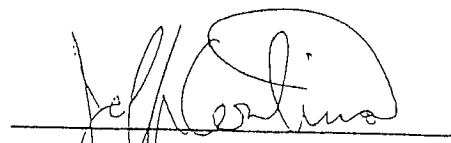
V.J. Gautieri Development
45 Liberty Street
P.O. Box 322
Buffalo, New York 14202

Attention: Mr. Victor Gautieri, Vice President

Project No. 99-02064
May 26, 1999



Richard D. Rall
Environmental Services Manager



Jeff Contino
Environmental Geologist

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PHASE I ENVIRONMENTAL SITE ASSESSMENT

Parking Garage
75-77 West Huron Street
Buffalo, New York 14202
Project No. 99-02064

May 26, 1999

EXECUTIVE SUMMARY

In accordance with the Maxim Technologies of New York, Inc. (Maxim), proposal dated May 10, 1999 (authorized May 12, 1999), Maxim performed a Phase I Environmental Site Assessment (ESA) on the above-referenced property (hereinafter, "subject property") for V.J. Gautieri (VJGD). The scope of service, objectives, extent and limitations of the services are described in more detail in the text of the report.

- ▶ The subject property occupies approximately 0.25 acre of land and is located on the north side of West Huron Street in the City of Buffalo, County of Erie, New York.
- ▶ The subject property can generally be described as rectangular-shaped with frontage on West Huron Street. Nearly the entire parcel is occupied by the six story masonry/wood-framed garage facility. The facility (circa 1900) is presently operated as a public parking garage. The basement and floors one through four are currently used for parking. The fifth and sixth floors are not presently utilized.
- ▶ The roof of the facility is made up of a rubber-like membrane with built-up flashing materials. The painted surfaces on the roof and both ground-to-roof stairways are in fair to poor condition.
- ▶ Two 55-gallon, one 10-gallon and one "pump type" steel drums of unknown contents were observed on the sixth floor.
- ▶ Oil staining was observed on the wood flooring along with potential asbestos containing building material (ACB) pipe insulation on the fifth floor.
- ▶ Significant oil staining and residue were present on the concrete floor area surrounding fourth and third floor drains. In addition, significant residue was observed within these two drains. Asphalt shingle-like and vinyl flooring cover apparent wood flooring on portions of the fourth and second floors, respectively.

- ▶ A large out-of-use heater boiler with potential ACM insulation was observed in the basement.
- ▶ Excluding typical parking lot staining, moderate oil staining was observed near the southwest overhead door entrance to the building (adjacent to an inaccessible interior room).
- ▶ The subject property is bordered to the north by an asphalt covered parking lot. The "Health Care Services" office building/property are immediately adjacent to the east (very little separation). Located south of the subject property (across West Huron Street) are a parking lot, the "Huron Hotel" building, an office and an attorney's office/parking lot. The subject property is bordered to the west by an automobile repair facility, "Seneca Copy Center" facility, "King's Court" restaurant and various offices. For purposes of this ESA, the term "adjoining property", as defined by the ASTM standard means properties that border or are contiguous or partially contiguous with the subject property or would be so but for a street, road or other public thoroughfare separating them.
- ▶ Historical records indicate that many tank removals have occurred at the subject property. However, it is not clear whether all UST's have been removed from the parcel. In addition, no indication regarding the presence or absence of leaked/spilled petroleum in the subsurface was listed. The records also indicate that the parcel adjacent to the west of the subject property historically was used as a gasoline station.
- ▶ It is the opinion of Maxim that the available information collected for this Phase I ESA revealed the presence of recognized environmental concerns in connection with the subject property. The specific concerns associated with the subject property include the possible presence of UST's and potential petroleum product-related contamination. Additional concerns with the subject property include are the possible presence of ACM and lead based paint (fair to poor condition) on/within the building. Radon gas infiltration may also exist within the building. The petroleum product-related concerns are summarized below.

Exterior Petroleum-Related Contamination

- o Subsurface contamination may be present due to:
 1. Possible UST leakage;
 2. Possible historic petroleum spillage at the subject property;
 3. Adjacent parcel (to the west) spill site listings and its former usage as a gasoline station; and,
 4. Current oil-like staining on the asphalt near the southwest garage door entrance of the building. This area was located adjacent to an inaccessible room of the ground floor of the building.

- o Lead contamination of the subsurface may also be present due to its historic use as an additive of gasoline.

Interior Petroleum Contamination

- o Oil-like staining/residue on the wood floors and in the vicinity of various floor drains within the building;
- o The presence of various sized steel drums of unknown contents within the building;

Although not an environmental concern, it should be noted that the significant quantity of pigeon droppings observed on the sixth floor may pose a health concern for future building usage in this area. ✓

Recommendations

Based on the results of the foregoing assessment, it is recommended that a Phase II ESA be completed at the subject property. The scope-of-work should include a subsurface investigation and surficial/drum sampling plan. The Phase II ESA should also include ACM/lead based paint/radon gas surveys for two reasons: 1) renovation of the structure is planned; 2) Although limited, office space is presently being utilized within the building.

1.0 INTRODUCTION AND SCOPE OF SERVICE

In accordance with the Maxim proposal dated May 10, 1999, Maxim performed a Phase I ESA on the subject property. The ESA includes Maps and Drawings presented in Appendix A, Site Reconnaissance Photographs in Appendix B, Limitations in Appendix C, Regulatory Databases in Appendix D and Freedom of Information Responses in Appendix E.

This report is an instrument of service of Maxim and includes limited research, a review of specified and reasonably ascertainable listings and a site reconnaissance to identify "recognized environmental conditions" in general accordance with the American Society for Testing and Materials (ASTM) Standard E1527-97; however, this ESA may reflect additional or reduced services or service enhancements requested or authorized by VJGD. "Recognized environmental conditions" are defined under the ASTM standard as "the presence or likely presence of any hazardous substances or petroleum products on a site under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property." Maxim's ESA was completed in accordance with generally accepted practices of the profession undertaken in similar studies at the same time and in the same geographical area, and Maxim observed that degree of care and skill generally exercised by the profession under similar circumstances and conditions.

This study/report has been prepared on behalf of and for the exclusive use of VJGD solely for its reliance in the environmental assessment of this site. VJGD is the only party to which Maxim has explained the risks involved and which has been involved in the shaping of the scope of services needed to satisfactorily manage those risks, if any, from the VJGD point of view. Accordingly, reliance on this report by any other party may involve assumptions whose extent and nature lead to a distorted meaning and impact of the findings and opinions related herein. Maxim's findings and opinions related in this report may not be relied upon by any parties except VJGD. With the consent of VJGD and Maxim, Maxim may be available to contract with other parties to develop findings and opinions related specifically to such other parties' unique risk management concerns related to the site.

2.0 REVIEW OF PREVIOUS STUDIES

No previous environmental studies pertaining to the subject property were available for review. In addition, Maxim has no knowledge of any environmental evaluations that have been completed at the parcel.

3.0 SITE DESCRIPTION

3.1 Location and Current Use

The subject property occupies approximately 0.25 acre of land based on the City of Buffalo Assessor's Department records. The parcel is located on the north side of West Huron Street in the City of Buffalo, County of Erie, New York as illustrated on the Vicinity

Map presented in Appendix A (Drawing No. 1). The parcel is currently occupied by a six-story parking garage and has a City of Buffalo zoning designation of "C-3", Central Business District.

3.2 Site and Area Features

A site walkover was completed on May 14, 1999, by a Maxim environmental geologist. Ms. Sherill Fleming, current owner of the subject property, accompanied Maxim during the site walkover. A Site Plan of the subject property illustrating the general subject property features is presented in Appendix A as Drawing No. 2. Refer to Appendix B for referenced photographs. It should be noted that the subject property conditions detailed in this report are as they were observed by Maxim at the time of the site walkover.

The subject property can generally be described as rectangular-shaped with frontage on West Huron Street. Nearly the entire parcel is occupied by the six story masonry/wood-framed structure (Photograph No. 1). The facility (circa 1900) is presently operated as a public parking garage. The basement and floors one through four are currently used for parking. The fifth and sixth floors are not presently utilized.

The roof of the building contains various skylights and two stairway (north/south) access rooms protruding from the roof surface. A third room was inaccessible but is most likely a protrusion of the mechanical apparatus for a large car elevator (said to be water pressure driven). An electrically operated person elevator was located adjacent to the southern stairway. Its mechanicals were observed in the roof's southern stairway access room. The roof is made up of a rubber-like membrane with built-up flashing materials (Photograph No. 2). The painted surfaces on the roof and both stairways (Photograph 3) are in fair to poor condition.

The sixth floor of the structure is currently unused. Significant quantities of pigeon droppings were observed on floor. It appears that southern portion of this floor was formerly used as office space as evidenced by dilapidated desks, cabinets and tables. One 55-gallon, one 10-gallon and one "pump type" steel drums were observed in the northwest corner of this floor (Photograph No. 4). An additional 55-gallon drum was observed along the north wall. None of the drums contents could be verified during the site walkover.

Although currently unused for general parking, two cars were observed on the fifth floor. Oil staining was observed on the wood flooring along with potential asbestos containing building material (ACM) pipe insulation (Photograph No. 5). A small quantity of hay was scattered about the floor surface.

Automobile parking was observed on the remaining floors as well as the basement area of the facility. A floor drain was observed on the northern end of the fourth, third and second floors. Significant oil staining and residue were present on the concrete floor area surrounding the fourth and third floor drains. In addition, significant residue was observed within these two drains. Asphalt shingle-like and vinyl flooring cover apparent wood flooring on portions of the fourth and second floors, respectively.

Offices were located on the south end of the third and second floors. According to

the current owner, the inaccessible third floor office contained miscellaneous carpet samples and furniture. The second floor office was occupied by a tenant. A mechanical room with heater (Photograph No. 6) and vinyl floor tile occupied a room within the second floor office.

The concrete floored ground level (first floor) also contained an office at its south end. According to the current owner, the inaccessible office is used for furniture storage. A possible former automobile service area was observed on the north end of the first floor (Photograph No. 7).

Large water pipes were observed in the basement. This would indicate that a "water pressure driven" car elevator (previously referenced) was likely. A large out-of-use heater boiler was observed in the basement. Potential ACM insulation (Photograph No. 8) was observed on/near the boiler. It should be noted that an apparent ground water seep was observed in the basement. The water was running through a trough to a sump. According to the current owner, the water is pumped from the sump and discharged to the municipal sewer system.

The exterior portions of the parcel mainly consisted of an asphalt parking/driving area on the west side of the subject property. Excluding typical parking lot staining, moderate oil staining was observed near the southwest overhead door entrance to the building (Photograph No. 9). It should be noted that an inaccessible room was observed adjacent to the exterior staining area.

3.3 Adjoining and Near-by Properties

The subject property is bordered to the north by an asphalt covered parking lot. The "Health Care Services" office building/property are immediately adjacent to the east (very little separation). Located south of the subject property (across West Huron Street) are a parking lot, the "Huron Hotel" building, an office and an attorney's office/parking lot. The subject property is bordered to the west by an automobile repair facility, "Seneca Copy Center" facility, "King's Court" restaurant and various offices. For purposes of this ESA, the term "adjoining property", as defined by the ASTM standard means properties that border or are contiguous or partially contiguous with the subject property or would be so but for a street, road or other public thoroughfare separating them.

3.4 Topography, Surface Water Bodies/Drainage

The general topography of the subject property is flat. Generally, it appears that surface water on the parcel migrates along the ground surface to various City of Buffalo storm water drainage intakes along West Huron Street.

3.5 Utilities

The facility at the subject property has utility company supplied electrical and natural gas services. In addition, municipal water and sewer service is available and in use at the subject property.

4.0 WETLANDS/GEOLOGIC/HYDROGEOLOGIC CONDITIONS

In 1977, the U.S. Fish and Wildlife Service began the National Wetlands Inventory (NWI), a systematic effort to classify and map America's remaining wetlands. The NWI describes wetlands according to the "Classification of Wetlands and Deepwater Habitats of the United States," a system that describes wetlands by soils, hydrology, and vegetation according to the following wetlands definition:

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes, (2) the substrate is mainly undrained hydric soil, and (3) the substrate is saturated with water or covered by shallow water at some time during the growing season of each year.

The NWI Wetlands Map and the New York State Department of Environmental Conservation (NYSDEC) Wetlands Map were reviewed. The NWI and NYSDEC maps indicate that there are no wetland areas on, adjacent to, or abutting the subject property. The Map of Flood-Prone Areas (dated 1973) of the subject property area indicated that the subject property is not located in a flood-prone area. The subject property area is within in the Buffalo River watershed.

The soil type present at the subject property identified on the United States Department of Agriculture (USDA) Soil Conservation Service Soil Survey of Erie County (SCS), New York (issued in 1986) is Urban Land (Ud). Ud soils are used to classify areas where 80 percent or more of the soil surface is covered by asphalt, concrete, buildings or other impervious structures. These mappings include parking lots, shopping/business centers and industrial parks. Also included in the mapping are some landfills that have not been built upon or covered with asphalt. In many of these areas several feet of fill has been placed over marshes and flood plains. It should be noted that historical research of the subject property vicinity does not indicate that the former presence of a landfill, marsh or flood plain in the subject property vicinity.

The Quaternary Geology of New York Map (Niagara Sheet, 1977) indicates that the subsurface soils in the subject property vicinity were outwash, terrace and delta deposits from strongly aggrading streams flowing from former ice sheets of the glacial period in history. According to the Geological Map of Erie County, New York (1963), the bedrock in the vicinity of the subject property is Onondaga Limestone. The depth to bedrock in the parcel area is not known.

Based on a review of the subject property topographic conditions as depicted on the United States Geological Survey Topographic Quadrangle Map of Buffalo, NW, New York-Ontario dated 1965, and the observed local topography, it appears that the local (shallow)

and regional (deep) ground water flow direction in the vicinity of the subject property is west toward Lake Erie located approximately 1/2-mile west of the subject property. We have assumed that the ground water table typically conforms to surface topography. It should be noted that the local (shallow) ground water flow direction is typically inhibited by subsurface features present in an urban area.

5.0 HISTORICAL INFORMATION

5.1 Historical Sources Used

Historical use information for the subject property and adjoining properties was obtained from reviewing reasonably ascertainable historical sources such as past ownership information, city directories (when available), aerial photographs and additional sources. Previous subject property usage is referenced from the present back to 1924 using the reasonably ascertainable historical sources listed below.

City Directories- City directories include listings of residents, businesses and professional concerns organized both alphabetically by name similar to a telephone book, and alphanumerically by street name then specifically by street address. The historical directories of the subject property area were not reviewed since the subject property usage (historic parking garage/horse stable) was determined from other sources.

Review of Aerial Photographs- USDA-SCS aerial photographs of the subject property vicinity from the years 1938, 1942, 1951, 1959, 1966, 1978, 1985, 1990 and 1995 were reviewed to assist in establishing prior land use and evidence of processes, facilities or surface features that might be an indication of the storage or disposal of waste materials at the subject property. Due to the small scale of the most of the photographs, interpretation of site features is limited. A summary of this review is presented in the following table.

AERIAL PHOTOGRAPH SUMMARY (SP=subject property)		
Date	Source of Aerial	Photograph Identification
1938, 1942, 1951 & 1959	Erie County Soil Conservation Service	4-40, J-5, G6 & 6V-13
SP: All- Generally, same as present; Vicinity: All- Generally, same as present.		
1966	Erie County Soil Conservation Service	1GG-163
SP: Generally, same as present; Vicinity: Generally, same as 1959 but structures on northwest corner of Delaware Avenue and West Huron Street appear to have been demolished.		
1978, 1985, 1990 & 1995	Erie County Soil Conservation Service	201L, D4, 1390-38A & Nat'l Digital Ortho. Photo.
SP: Generally, same as present; Vicinity: Generally, same as present.		

Atlas Maps- Street and Township (i.e. ward) atlas maps dating from the late 1800's to the early 1900's are available for some urban areas. These maps depict streets and structures, underground/above ground storage tanks, etc. No historic atlas maps of the subject property area were available for review.

Sanborn Fire Insurance Maps- In the late nineteenth century, the Sanborn Company began preparing maps for use by fire insurance companies. These maps indicate construction materials of specific structures in developed urban areas and are typically published for central business districts. One historic Sanborn map of the subject property area was available for review at the City of Buffalo Fire Prevention Office.

The 1925 edition (updated to 1961) illustrated three gasoline storage tanks located on the south end of the subject property driveway. This would indicate that the tanks were underground.

Historical Interviews- Interviews with persons familiar with the subject property vicinity were completed to obtain information pertinent to the environmental evaluation of the property. The current owner and proposed purchaser were the only individuals with information regarding the history of the subject property.

Ms. Sherill Fleming, current owner of the subject property, informed Maxim that the subject property building was used in the very early 1900's as a horse stable. As referenced previously referenced, hay was observed on the fifth floor which provides support to the above statement. With automobile usage increasing, the building was used as a parking garage from the 1920's to the present. Ms. Fleming also stated that the parcel was owned and used by Hertz Car Rental (insignia currently painted on building side-see Photograph No. 1). Ms. Fleming related that she has no knowledge of the presence of underground storage tanks (UST's) at the subject property.

Mr. Vito Gautieri, prospective purchaser of the parcel, indicated that the large car elevator was operated with water pressure. Mr. David Siegel, representing the City of Buffalo Water Department, indicated to Maxim that the department's records for the subject property did not indicate the presence or usage of municipal water to operate an elevator. It should be noted that Mr. Siegel stated that his department's records normally would not include such information. The lack of apparent mechanical room above, below or adjacent to this elevator supports the water pressure theory of operation.

The City of Buffalo Assessment Department records pertaining to previous ownership of the subject property was limited to one listing: 75 West Huron Street Incorporated. The Engineering Department did not provide any information related to the subject property history. The Building Inspection/Permit Department records indicated that the subject property was operated as an automotive related garage from 1924 to the present under

various ownership groups. The significant permits are listed in the following table.

CITY OF BUFFALO PERMIT DEPARTMENT RECORDS		
PERMIT DATE	LISTED OWNER	DESCRIPTION
10/27/14	---	Install water pressure tanks on roof
2/7/24	Huron Garage Co.	Alter public garage
12/15/58	Anne J. Weber	Alter masonry garage/car rental
7/23/63	75 West Huron St Inc.	Place/use 1,000-gal waste oil tank
9/28/65	"	Place/use 4,000-gal diesel tank
1/23/68	Hertz U-Drive It	place 550-gal gasoline tank
1/19/76	Huron Garage	Replace two gasoline pumps
11/10/80	75 West Huron St Inc.	Used car lot for car sales in conjunction w/existing vehicle rental service

The 1914 permit for water pressure tank installation indicates that the alleged large elevator operation via water pressure was likely. The records also indicate that petroleum products were previously stored at the subject property.

The City of Buffalo Fire Prevention Department UST records were also researched. These records indicate the installation and removal of various sized UST's. These records also indicated the occurrence of tank leakage and spillage. These records are summarized in the table presented on the following page.

CITY OF BUFFALO FIRE PREVENTION RECORDS		
DATE	ACTION	DESCRIPTION
1931	Gasoline Tank Survey	1-7,000 gal, 1-1,000 gal & 2 unknown; Product supplied by Standard & Texaco
3/9/40	Survey	1-8,400 gal, 2-1,000 gal & 1-550 gal; contained gasoline/alcohol
1/3/55	Violation Notice	Mechanical ventilation for third floor grease pit and UST for waste oil required
7/17/63	Installation	Replacement of 1,000 gal waste oil UST
9/15/65	Installation Permit	Install 4,000 gal diesel (Drawing shows adjacent Sunoco station)
9/1/67	Inspection	500-gal gasoline UST should be replaced

CITY OF BUFFALO FIRE PREVENTION RECORDS		
DATE	ACTION	DESCRIPTION
1/23/68	Application	Install 550 gal gasoline UST ("Replacement of a Leaker") ✓
3/8/74	Letter	Diesel fuel spill
2/6/80	Letter	2 abandoned UST's (1-1,000 gal/1-550 gal) must be removed/backfilled to grade ✓
2/29/80	Letter	Bureau of Fire Prevention would consider closure in-place (fill w/concrete) of above tanks
10/2/80	Removal Record	1-1,000 gal & 1-550 gal UST's ✓
11/12/85	Memo From Contractor	Removed 1-8,000 gal (unleaded gasoline), 1-4,000 gal (diesel fuel) & 1-1,000 gal (waste oil) UST's

The above records indicate that, although many tank removals have occurred at the subject property, it is not clear whether all UST's have been removed from the parcel. In addition, no indication regarding the presence or absence of leaked/spilled petroleum in the subsurface was listed. The records also indicate that the parcel adjacent to the west of the subject property historically was used as a gasoline station.

5.2 Site and Area Descriptive Chain-of-Use

A Copy of the Abstract of Title for the subject property was not available for review. According to the City of Buffalo Assessment records, the subject property is currently owned by TS Fleming.

6.0 SITE RECONNAISSANCE

A site reconnaissance was completed on May 14, 1999, by an Maxim environmental geologist.

6.1 Description of Site Processes

The subject property is currently used as a automobile parking garage.

6.2 Hazardous Substance Usage/Storage

No hazardous substances related to site operation are stored at the facility. However, four various sized steel drums were observed on the sixth floor. The contents of these drums could not be verified.

6.3 Petroleum Products Usage/Storage

No petroleum products are known to be stored or used at the subject property. One of the drums referenced above appears to possibly be an oil storage/dispensing container.

6.4 Underground And Above Ground Storage Tanks

No visible evidence of UST's or AST's such as fill pipes, vents, etc. was observed on the subject property. It should be noted that various sources indicate evidence of historic petroleum product storage in UST's at the subject property. Such petroleum products included gasoline, diesel fuel, waste oil and possibly alcohol. In addition, it is not clearly indicated in the available records whether all UST's have been removed from the parcel.

6.5 Drums And Containers

Four various sized steel drums were observed on the sixth floor. The contents of these drums could not be verified.

6.6 Polychlorinated Biphenyl (PCB) Usage

No visible evidence of electrical transformers or electrical equipment with PCB containing oil was observed on the subject property.

6.7 Stains, Corrosion, Strained Vegetation

Oil staining was observed on the wood flooring of various areas of the building. Significant oil staining and residue were present on the concrete floor area surrounding fourth and third floor drains. In addition, significant residue was observed within these two drains. Excluding typical parking lot staining, moderate oil staining was observed near the southwest overhead door entrance to the building.

6.8 Fill/Solid Waste Disposal

No fill piles were observed on the surface of the subject property. Other than typical "trash can" waste, the facility does not generate large quantities of solid waste.

Water

Applicable

were no water or natural gas wells observed at the subject property.

Disposal Systems

Utility is serviced by Erie County Sewer Authority.

And Sumps

Drains were observed on the fourth, third and second floors of the facility (north end of these floors). Apparent ground water seeping into the basement is collected in a trough and directed to a sump. According to the current subject property, the water is pumped from the sump and discharged to the sewer system. This connection could not be verified.

Ponds And Lagoons

No ponds or lagoons were observed on the subject property.

As

A preliminary asbestos survey was completed at the time of the site reconnaissance to identify visually apparent common ACM (i.e. thermal system insulation, floor tiles). Based on field observations, there was potential friable ACM located on the ceiling. In addition, the roofing materials, wall coverings, window caulking and sealants within the building may contain ACM. It should be noted that based on the age of the building (circa 1900), it is likely that ACM is present within or on the facility exterior surfaces.

Paint

Due to the age of the building (circa 1900), it is likely that lead based paint is present on painted surfaces within or on the outside of the structure. It should be noted that surfaces on the roof and both stairways are in fair to poor condition.

Other than typical waste.

6.2 Hazardous Substance Usage/Storage

No hazardous substances related to site operation are stored at the facility. However, four various sized steel drums were observed on the sixth floor. The contents of these drums could not be verified.

6.3 Petroleum Products Usage/Storage

No petroleum products are known to be stored or used at the subject property. One of the drums referenced above appears to possibly be an oil storage/dispensing container.

6.4 Underground And Above Ground Storage Tanks

No visible evidence of UST's or AST's such as fill pipes, vents, etc. was observed on the subject property. It should be noted that various sources indicate evidence of historic petroleum product storage in UST's at the subject property. Such petroleum products included gasoline, diesel fuel, waste oil and possibly alcohol. In addition, it is not clearly indicated in the available records whether all UST's have been removed from the parcel.

6.5 Drums And Containers

Four various sized steel drums were observed on the sixth floor. The contents of these drums could not be verified.

6.6 Polychlorinated Biphenyl (PCB) Usage

No visible evidence of electrical transformers or electrical equipment with PCB containing oil was observed on the subject property.

6.7 Stains, Corrosion, Strained Vegetation

Oil staining was observed on the wood flooring of various areas of the building. Significant oil staining and residue were present on the concrete floor area surrounding fourth and third floor drains. In addition, significant residue was observed within these two drains. Excluding typical parking lot staining, moderate oil staining was observed near the southwest overhead door entrance to the building.

6.8 Fill/Solid Waste Disposal

No fill piles were observed on the surface of the subject property. Other than typical "trash can" waste, the facility does not generate large quantities of solid waste.

6.9 Waste Water

Not Applicable

6.10 Wells

There were no water or natural gas wells observed at the subject property.

6.11 Sewage Disposal Systems

The facility is serviced by Erie County Sewer Authority.

6.12 Drains And Sumps

Floor drains were observed on the fourth, third and second floors of the facility (located on the north end of these floors). Apparent ground water seeping into the basement of the building is collected in a trough and directed to a sump. According to the current owner of the subject property, the water is pumped from the sump and discharged to the municipal sewer system. This connection could not be verified.

6.13 Pits, Ponds And Lagoons

No pits, ponds or lagoons were observed on the subject property.

6.14 Asbestos

A cursory asbestos survey was completed at the time of the site reconnaissance to assist in identifying visually apparent common ACM (i.e. thermal system insulation, floor tile, etc.). Based on field observations, there was potential friable ACM located on the observed piping. In addition, the roofing materials, wall coverings, window caulking and various floor areas within the building may contain ACM. It should be noted that based on the age of the building (circa 1900), it is likely that ACM is present within or on the facility in various locations.

6.15 Lead Paint

Based on the age of the building (circa 1900), it is likely that lead based paint is present on the painted surfaces within or on the outside of the structure. It should be noted that the painted surfaces on the roof and both stairways are in fair to poor condition.

6.16 Lead In Drinking Water

The piping of the domestic water supply system was not visible during the site walkover. If copper piping and solder is present at the pipe joints, there is the potential for the leaching of lead into the drinking water. No analytical testing of the drinking water was completed to confirm or disprove the presence of lead in drinking water.

6.17 Radon Gas

According to the regulatory database report secured through VISTA Information Solutions, Inc. (Vista), the subject property area has a Zone 1 average radon concentration [greater than 4.0 picocuries/liter (pCi/l)] and may be above the United States Environmental Protection Agency (USEPA) action level of 4.0 pCi/l in the subject property area. Since the subject property building has a basement, the potential for radon gas infiltration, if present in the subsurface, would be high. The specific concentration of radon gas within the facility would be required to evaluate the potential for radon gas infiltration. It should be noted that the Radon Zone 1 level given to the subject property vicinity may or may not reflect the actual conditions at the subject property.

7.0 REGULATORY INFORMATION

Various USEPA, NYSDEC, and municipal lists of waste sites, hazardous waste generators, and hazardous material users, as well as UST/leaking UST site and complaint report compilations were reviewed by Maxim using a regulatory database report prepared by VISTA. It should be noted that information in this report is limited by the accuracy of databases provided by these agencies.

The purpose of the records review is to obtain and review reasonably ascertainable records that will help identify past actions on the subject property or adjacent parcels that may cause environmental concerns at the subject property. As noted under ASTM, information requested and not received within 20 days after the report date will not be incorporated into this report. The approximate radial search distance (RSD) for the site vicinity review is noted under each database listed below and corresponds to the minimum ASTM requirement for that database. A copy of the VISTA regulatory report summary pertaining to this project is presented in Appendix D.

A summary of the information gathered from Maxim's review of the VISTA regulatory report is presented below. The agency "Release Date" of the information for each database is presented in parentheses.

7.1 NPL Sites [RSD=1.00 mile]

The USEPA maintains a National Priorities List ("NPL") of Superfund sites. Superfund sites are uncontrolled or abandoned hazardous waste sites identified for priority remedial action under the federal Superfund program. There are no Superfund sites listed in the NPL database (3/99) located within the search radius.

7.2 CERCLIS Sites [RSD=0.50 mile]

The USEPA maintains a database of sites it has investigated and is currently investigating for the release or the threatened release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") of 1980 (Superfund Act). NPL facilities are usually listed in this "CERCLIS" database. A "No Further Remedial Action Planned" ("NFRAP") site is a site that, after initial investigation, contamination was not found, removed quickly or was not serious enough to create a significant environmental concern.

There are no CERCLIS sites in the database (1/99) located within the search radius. Two NFRAP sites listed in the database (1/99) are located within the search radius. It is unlikely that conditions at these sites have adversely affected the environmental conditions at the subject property due to the distance of these sites from the subject property (over 1/4 mile) and their NFRAP designation. In addition, the sites are down/cross gradient from the subject property with respect to ground water flow direction (i.e. direction of potential contaminant plume migration).

7.3 RCRA Treatment, Storage And Disposal (TSD) [RSD=0.50 mile] And Corrective Action (CORRACTS) Facilities [RSD=1.00 mile]

The USEPA's Resource Conservation And Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. RCRA TSD's are facilities which treat, store and/or dispose of hazardous waste. A RCRA CA site indicates a RCRA TSD site that is subject to corrective actions as regulated under RCRA.

No RCRA TSD sites in this database (2/99) are located within the search radius. The CORRACTS database (2/99) includes three sites within the search radius of the subject property. It is unlikely that conditions at these sites have adversely affected the environmental conditions at the subject property due to the distance of these sites from the subject property (over 1/4 mile).

7.4 RCRA Violators (Viol) [RSD=0.25 mile]

Facilities listed in the RCRA Viol database are those which have been cited for RCRA violations at least once since 1980. The RCRA enforcement action taken against a

specific RCRA violator are also listed.

Two RCRA Viol sites in this database (2/99) are located within the search radius. It is unlikely that conditions at these sites have adversely affected the environmental conditions at the subject property as they are not located immediately adjacent to the subject property. In addition, each site obtained RCRA compliance status after the violation.

7.5 RCRA Generators [RSD=0.125 mile]

Facilities listed in the RCRA Generator database are designated as small and large quantity hazardous waste generators. Inclusion on the RCRA list does not, in and of itself, indicate that the facility is a source of contamination. As a RCRA facility, proper storage and disposal of hazardous substances are required to be documented by the generator. The RCRA database was searched to identify registered hazardous waste generator facilities on or in the vicinity of the subject property.

A large quantity generator (LgGen) indicates a facility that generates 1,000 kg/month, or greater of non-acutely hazardous waste, or 1 kg/month or greater of acutely hazardous waste. A small/very small quantity generator (SmGen) indicates a facility that generates less than 1,000 kg/month, but more than 100 kg/month of non-acutely hazardous waste.

Five RCRA SmGen and four RCRA LgGen facilities in these databases (2/99, both) are located within the search radius. It is unlikely that RCRA related operations at these sites have adversely affected the environmental conditions at the subject property due to: (1) their location with respect to the subject property (not abutting subject property boundary); and, (2) no RCRA violations on record.

7.6 Emergency Response Notification System (ERNS) Database [RSD=0.125 mile]

A review of the ERNS database was completed to identify reported releases of oil and hazardous substances on or adjacent to the site. The database contains information from spill reports made to federal agencies including the USEPA, the US Coast Guard, the National Response Center, and the New York State Department of Transportation (NYSDOT). No ERNS sites included in the database (12/98) were located within the search radius.

7.7 State Hazardous Waste Sites [RSD=1.00 mile]

The NYSDEC maintains a record of Registered Inactive Hazardous Waste Disposal sites (SPL). One SPL site included in the database (6/98) is located within the search radius. It is unlikely that conditions at this site have adversely affected the environmental conditions at the subject property due to the distance of the site from the subject property (approximately 1/2 mile). In addition, the site is located down gradient (close to Lake

Erie/Niagara River) from the subject property with respect to ground water flow direction (i.e. direction of potential contaminant plume migration).

7.8 State Landfill/Solid Waste Disposal Sites [RSD=0.50 mile]

The NYSDEC Division of Solid Waste maintains a Solid Waste Facility Directory (SWLF). The SWLF directory database was reviewed to identify such sites that are in the general vicinity of the subject property. The agency release date for each of the six SWLF categories is listed in the following table.

SWLF CATEGORY	
DESCRIPTION	RELEASE DATE
Incinerators-Resource Recovery Projects (INC)	June 1996
Regulated Medical Waste Facilities (RMW)	March 1997
Recycler's Listing (RCY)	July 1998
Active Solid Waste Disposal Sites (ASWF)	February 1999
Inactive Solid Waste Sites (ISWS)	February 1999
Registered Permitted Waste Tire Storage Facilities (WTS)	August 1998

There are no SWLF INC/RMW/RCY/ISWS/WTS sites included in the databases located within the search radius. One ASWF site containing municipal solid waste is located within the search radius. Therefore, it is unlikely that conditions at this site have adversely affected the environmental conditions at the subject property.

7.9 State Hazardous Waste Study Sites [RSD=0.50 mile]

The NYSDEC Division of Hazardous Waste Remediation, Bureau of Hazardous Site Control (SCL) maintains a database of sites with similar characteristics to those included in the USEPA CERCLIS database. The Hazardous Waste Disposal (HWS) section of this database (6/95) includes sites at which the NYSDEC has determined that further investigation is required. The Voluntary Cleanup Project List (VCP) section of the database (1/99) includes a list of volunteers willing to cleanup contaminated sites.

One SCL HWS site is located within the search radius. It is unlikely that conditions at this site have adversely affected the environmental conditions at the subject property due to the distance of the site from the subject property (approximately 1/3 mile). In addition, the site is located down gradient (close to Lake Erie/Niagara River) from the subject property with respect to ground water flow direction (i.e. direction of potential contaminant plume migration).

7.10 Petroleum Spills [RSD=0.125 mile]

The NYSDEC petroleum spill database was consulted to determine if petroleum spills have occurred at the subject property. There were no spills listed as occurring on the subject property. However, the City of Buffalo Fire Prevention Department records list a March 1974 diesel fuel spill on the parcel.

Seven spill sites listed in this database (1/99) are located within the search radius. Of the seven, the conditions at the site listed below have the potential to affect the environmental conditions at the subject property.

Precision Tune- 181 Delaware Avenue
Buffalo, New York 14202

Distance: Adjacent to west of subject property

Spill Date: 4/29/93

Details: **Substance:** Waste oil; **Spill Source:** Gasoline Station; **Quantity:** Not reported; **Remediation Status:** Case Closed 5/4/93; **NYSDEC No:** 9301417

Comments: Antifreeze and waste oil being dumped into storm sewer

Spill Date: 5/1/93

Details: **Substance:** Waste oil; **Spill Source:** Industrial; **Quantity:** Not reported; **Remediation Status:** Case Closed 5/27/93; **NYSDEC No:** 9302329

Comments: Dumping oil and antifreeze to ground and out driveway; entering sewer

Spill Date: 3/17/95

Details: **Substance:** Antifreeze; **Spill Source:** Industrial; **Quantity:** zero; **Remediation Status:** Case Closed 4/3/95; **NYSDEC No:** 9416399

Comments: Numerous antifreeze spill complaints

7.11 State Registered UST/AST [RSD=0.25 mile]/LUST Sites [RSD=0.50 mile]

The NYSDEC maintains a Petroleum Bulk Storage (PBS) registration database of PBS facilities which have a combined storage capacity of over eleven hundred (1,100) gallons of petroleum. UST's, above ground storage tanks (AST's) and Major Petroleum Storage Facilities (MPSF) are included in this database (1/99). Also included are Hazardous Substance Bulk Storage Facilities (HSBS) described as storage of regulated substances in AST's with a capacity of 185 gallons or greater and UST's of any capacity. The NYSDEC maintains an additional database (2/99) of leaking registered UST's (LUST's). Unregistered tank systems observed during the area reconnaissance and located in the immediate vicinity of the subject property, if applicable, are also noted below.

No MPSF or HSBS sites included in the UST/AST databases were within the search radius. Within the respective search radius, 31 UST/AST and 16 LUST sites were included. It is unlikely that conditions at these sites have adversely affected the environmental conditions at the subject property as none of the sites is immediately adjacent to the subject property. In addition, the three sites nearest the subject property are down gradient from the subject property with respect to ground water flow direction (i.e. direction of potential contaminant plume migration).

It should be noted that historical research indicates that the subject property was formerly a UST site. In addition, it is not clearly indicated in the available records whether all UST's have been removed from the parcel.

8.0 FEDERAL AND STATE INQUIRIES

Written information requests were made to the NYSDEC Region 9 office, USEPA Region II office and New York State Department of Labor in order to determine if past actions on the subject property or adjacent parcels have resulted in any environmental concern at the subject property or immediate vicinity. A response has not yet been received from either of these agencies of this writing. If information is subsequently received from these agencies that may be of potential environmental concern, it will be expediently forwarded to Mr. Victor Gautieri with modifications to our conclusions, if warranted.

9.0 FINDINGS AND CONCLUSIONS

It is the opinion of Maxim that the available information collected for this Phase I ESA revealed the presence of recognized environmental concerns in connection with the subject property.

The specific concerns associated with the subject property include the possible presence of UST's and potential petroleum product-related contamination. Additional

concerns with the subject property are the possible presence of ACM and lead based paint (fair to poor condition) on/within the building. Radon gas infiltration may also exist within the building. The petroleum product-related concerns are summarized below.

Exterior Petroleum-Related Contamination

- o Subsurface contamination may be present due to:
 1. Possible UST leakage;
 2. Possible historic petroleum spillage at the subject property;
 3. Adjacent parcel (to the west) spill site listings and its former usage as a gasoline station; and,
 4. Current oil-like staining on the asphalt near the southwest garage door entrance of the building. This area was located adjacent to an inaccessible room of the ground floor of the building.
- o Lead contamination of the subsurface may also be present due to its historic use as an additive of gasoline.

Interior Petroleum Contamination

- o Oil-like staining/residue on the wood floors and in the vicinity of various floor drains within the building;
- o The presence of various sized steel drums of unknown contents within the building;

Although not an environmental concern, it should be noted that the significant quantity of pigeon droppings observed on the sixth floor may pose a health concern for future building usage in this area.

Based on the results of the foregoing assessment, it is recommended that a Phase II ESA be completed at the subject property. The scope-of-work should include a subsurface investigation and surficial/drum sampling plan. The Phase II ESA should also include ACM/lead based paint/radon gas surveys for two reasons: 1) renovation of the structure is planned; 2) Although limited, office space is presently being utilized within the building.

Field notes and other information relating to this project are on file in our Hamburg, New York, office and are available for review. We trust that the report presented herein satisfies your current requirements. Should you have any questions or comments, please contact us. We have appreciated the opportunity to work with you on this project.

APPENDIX B

S-5167 South Park Ave. • P.O. Box 0913 • Hamburg, NY 14075 • (716) 649-8110 • Fax: (716) 649-8051

Austin Research Engineers • Chen-Northern • Empire Soils Investigations
Kansas City Testing • Southwestern Laboratories • Twin City Testing

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 1



DESCRIPTION: Northeast view of subject property.

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 2



DESCRIPTION: Roof of subject property (viewing north).

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

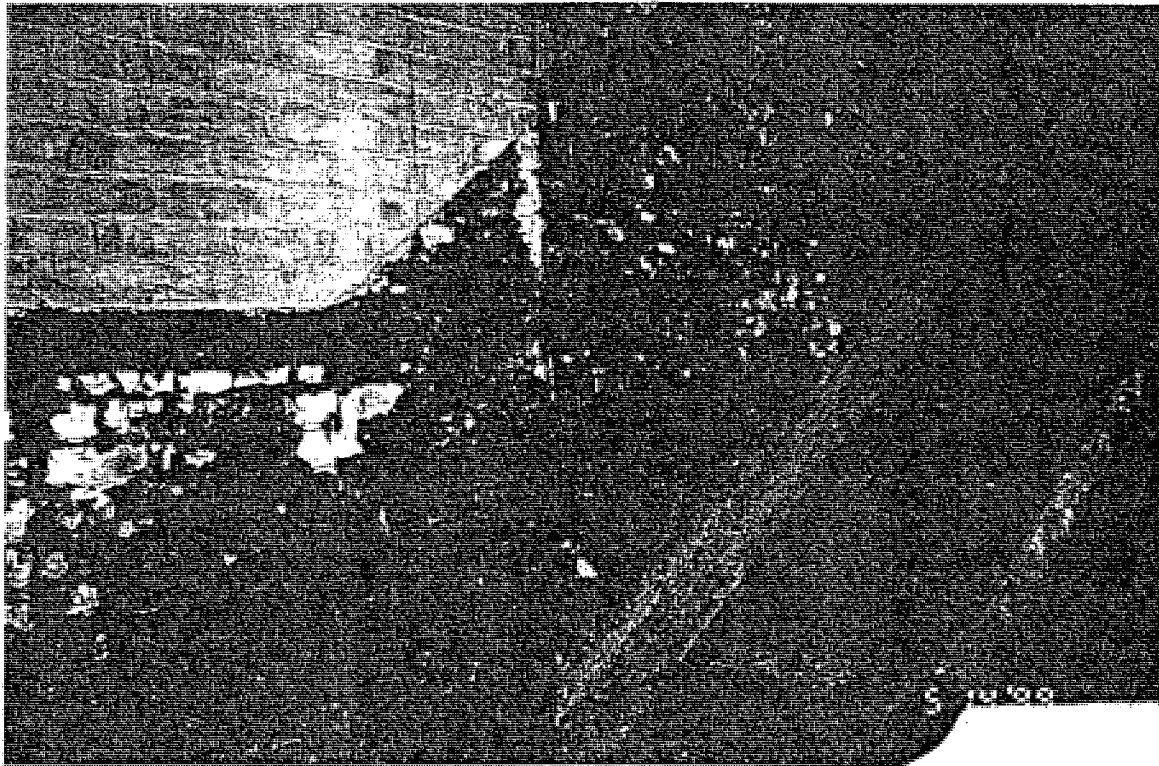
PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 3



DESCRIPTION: North stairway.

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

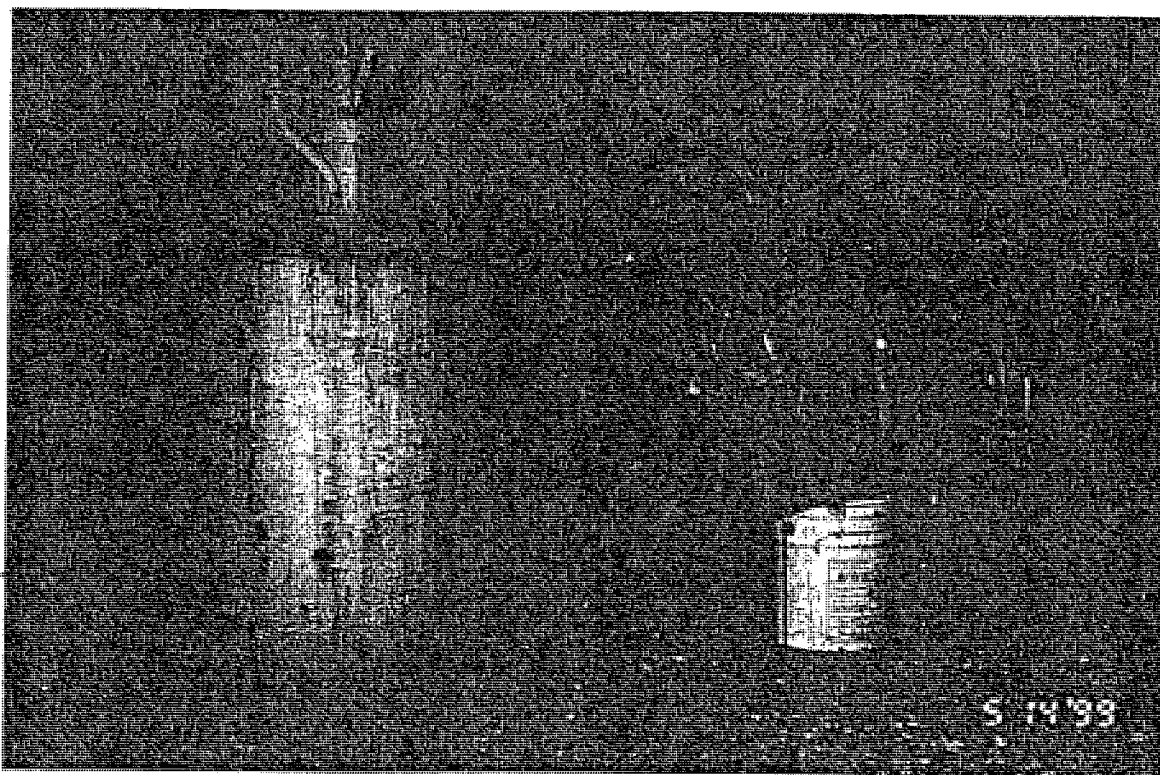
PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 4



DESCRIPTION: Three of four fifth floor drums.

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

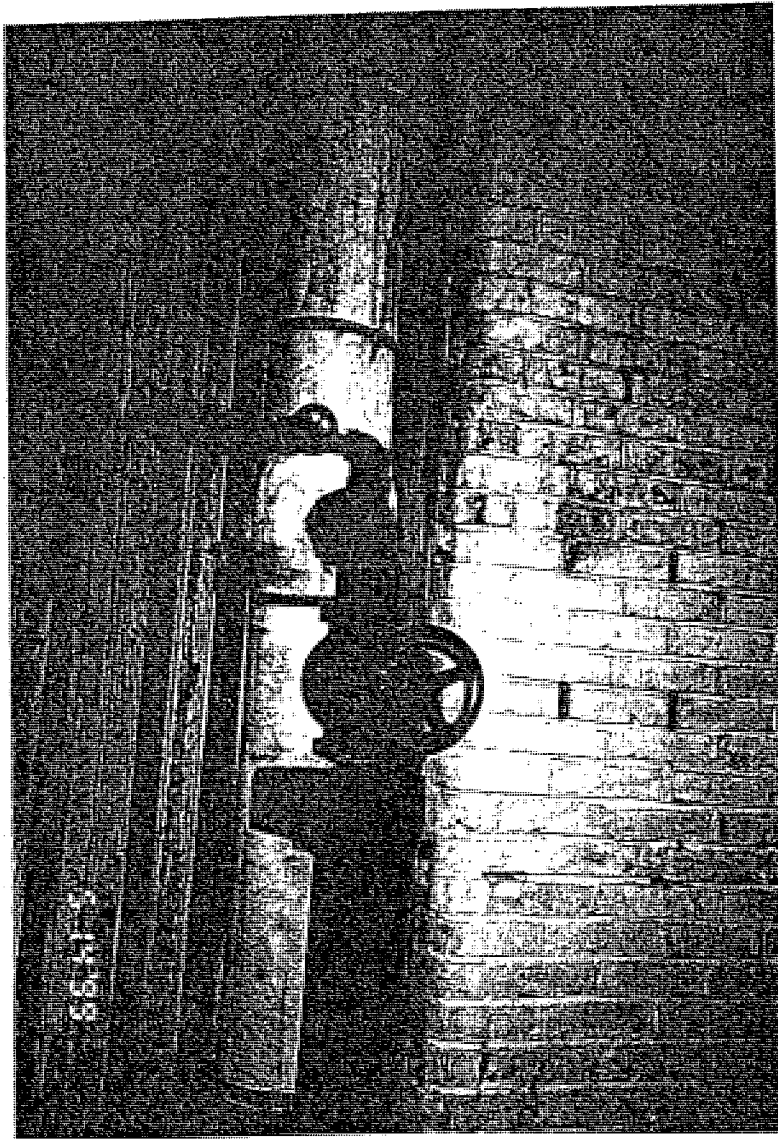
PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 5



DESCRIPTION: Potential ACM pipe insulation (fifth floor).

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

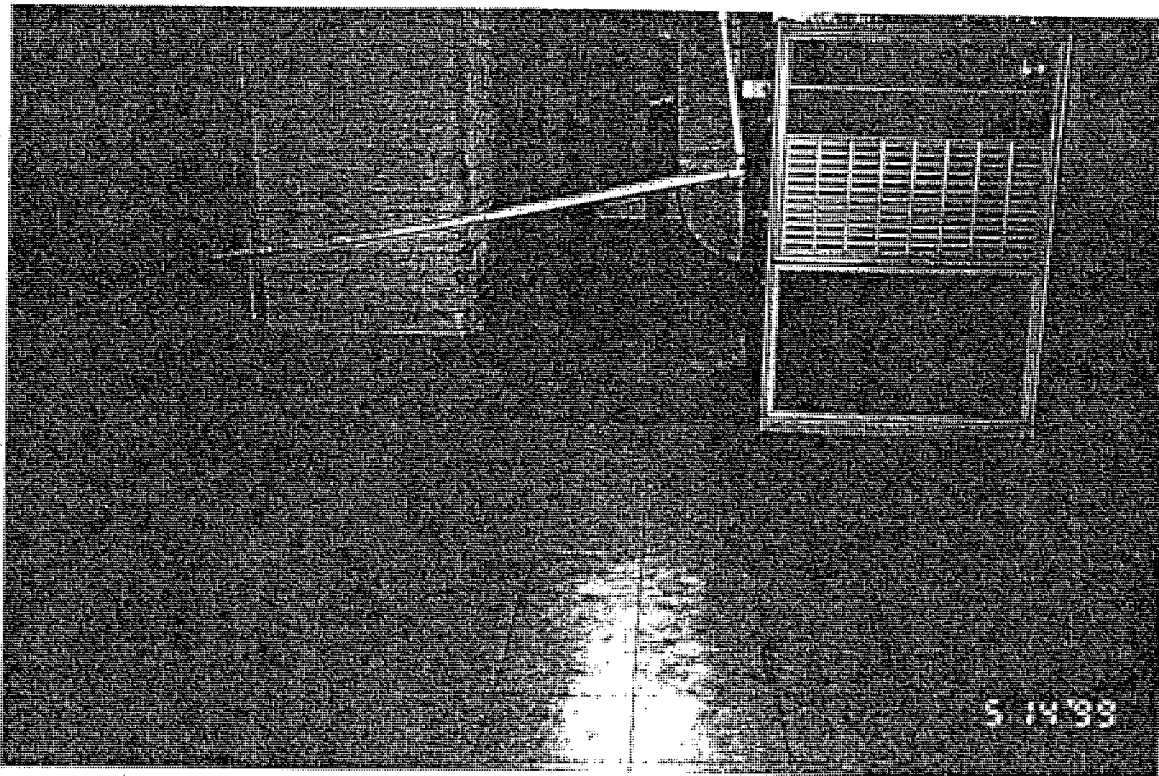
PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 6



DESCRIPTION: Second floor mechanical room (note vinyl flooring).

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

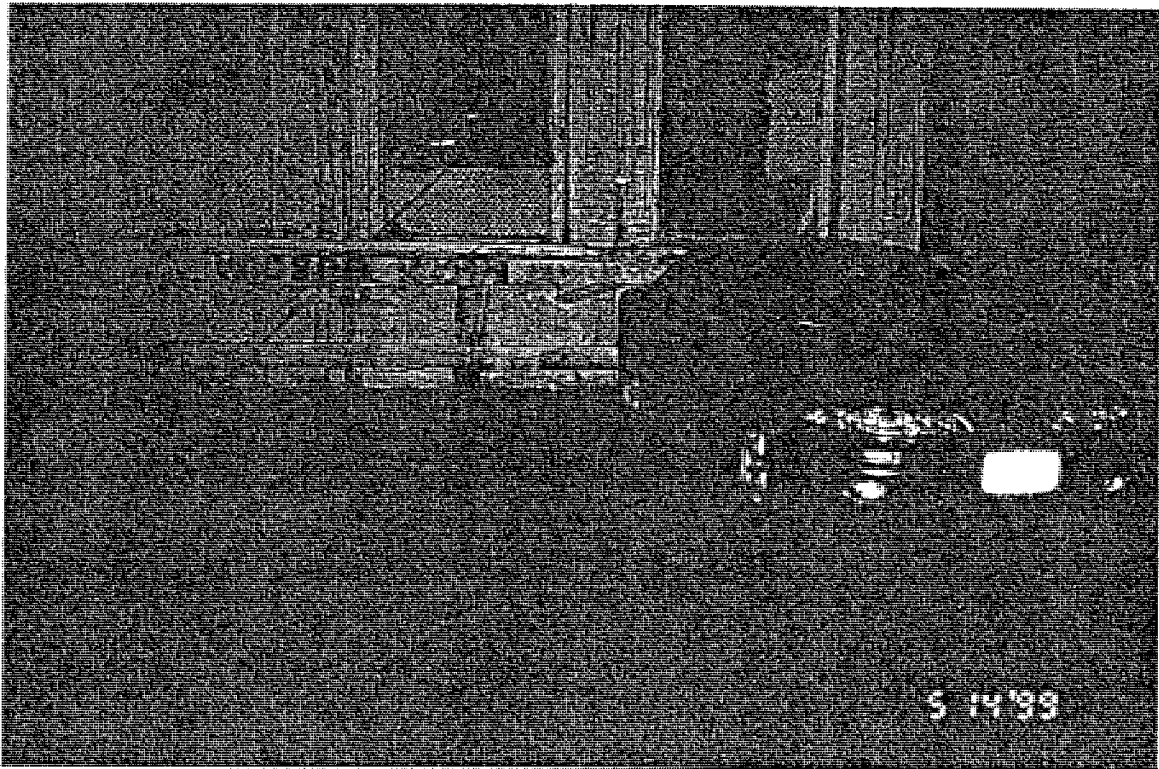
PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 7



DESCRIPTION: Possible former automobile service area (first floor).

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

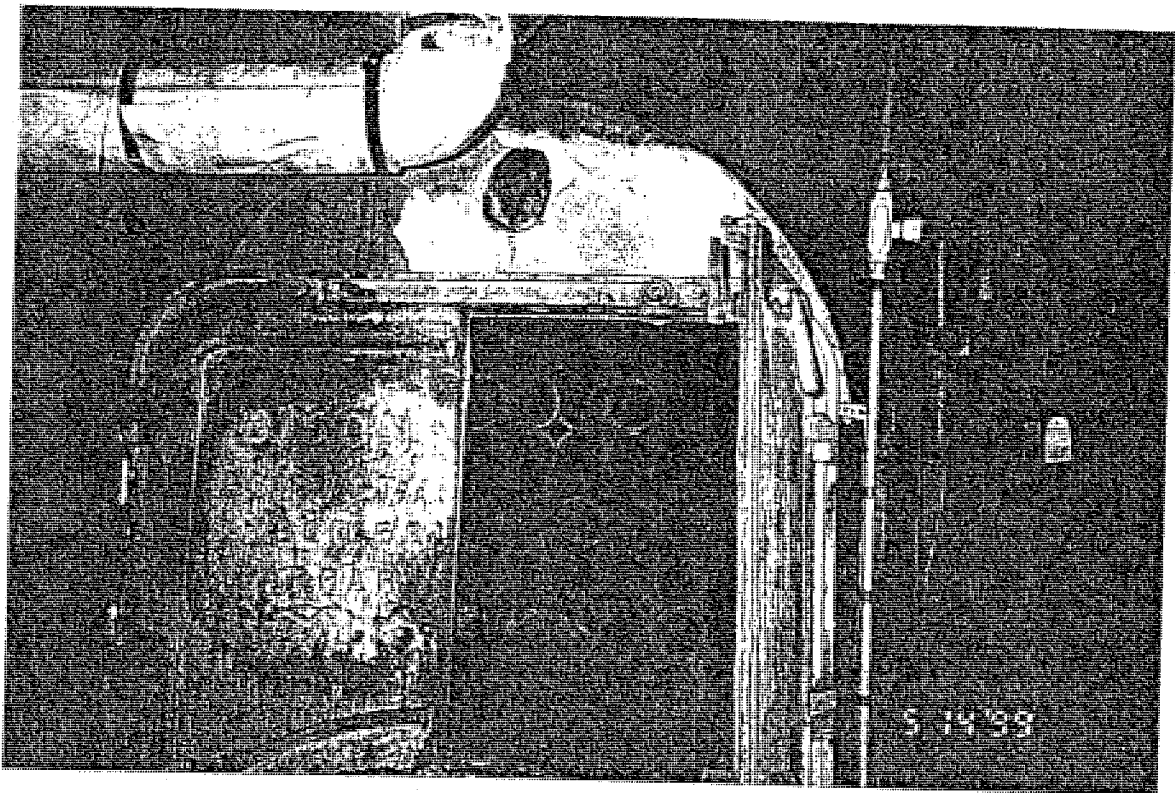
PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 8



DESCRIPTION: Out-of-use heater boiler (basement).

MAXIM

Technologies, Inc.

CLIENT: V.J. Gautieri Development

PROJECT: Phase I Environmental Site Assessment

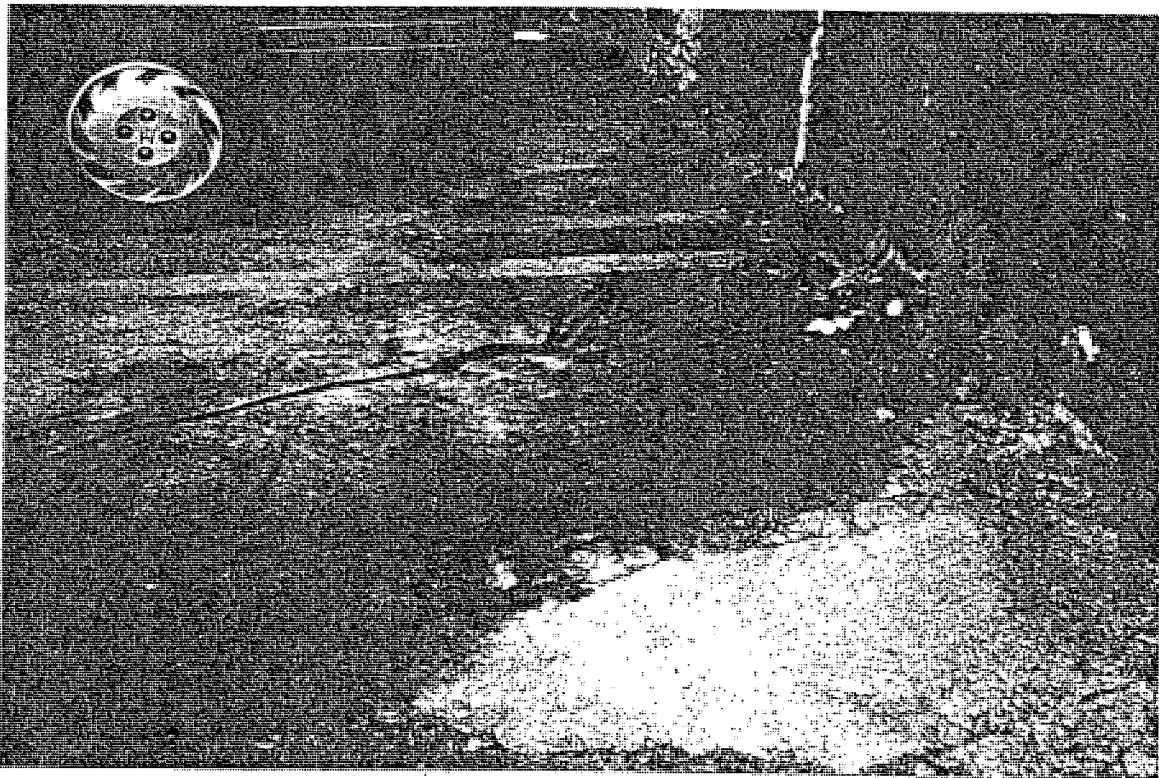
PROJECT LOCATION: 75-77 West Huron Street, Buffalo, New York 14202

PROJECT NUMBER: 99-02064

DATE PHOTOGRAPHED: 5/14/99

PHOTOGRAPHED BY: J. Contino

PHOTOGRAPH NO.: 9



DESCRIPTION: Moderate oil staining near southwest garage door entrance.

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-4
2001 Phase II ESA (Benchmark)

PHASE II ENVIRONMENTAL SITE INVESTIGATION REPORT

75-77 WEST HURON STREET PROPERTY
BUFFALO, NEW YORK

August 2001

0050-001-100

Prepared for

Peter J. Burke, Esq.

Prepared by:



50 FOUNTAIN PLAZA, SUITE 1350 • BUFFALO, NEW YORK 14202

PHASE II ENVIRONMENTAL SITE INVESTIGATION REPORT
75-77 WEST HURON STREET PROPERTY
BUFFALO, NY

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Attachment 4	Philip Analytical Services, Corp. Analytical Data Summary Package

1.0 INTRODUCTION

1.1 BACKGROUND

Benchmark Environmental Engineering & Science, PLLC (Benchmark) conducted a Phase II Environmental Site Investigation (ESI) for Mr. Peter J. Burke, Esq. for the property located at 75-77 West Huron Street, Buffalo, NY (commonly referred to as the Huron Street Garage). The subject property is comprised of an approximately 0.25 acre parcel containing an asphalt surface parking lot adjacent to a multi-level parking garage. The property is bounded on the north by an additional surface parking lot, to the east and west by commercial/office buildings and on the south by West Huron Street (Figure 1).

The Phase II ESI followed a 1993 Phase I Environmental Site Assessment (ESA) for the subject property prepared by Enasco, Inc. and a 1999 Phase I ESA prepared by Maxim Technologies. The Phase II ESI was designed to address potential environmental conditions identified in the 1999 ESA. Specifically, the 1999 ESA indicated that a number of underground storage tanks (USTs) had previously existed at the site, but that it was not possible to conclude whether all of the tanks had been removed. Therefore, the Phase II ESI consisted of two parts: an exterior UST/petroleum release investigation and a basement groundwater investigation. The exterior UST/petroleum release investigation involved excavation of test pits in the surface lot adjacent to the parking garage (i.e., the area of reported prior USTs) to investigate whether USTs and/or petroleum-impacted soils remained on the property. Test pits were selected over non-intrusive tank investigation measures, such as electromagnetic (EM) survey, due to the likely EM interference posed by a reinforced concrete pad that exists beneath the majority of the surface asphalt. Test pits also provide a more positive means for evaluating suspect UST locations and allow for field observation of subsurface conditions as well as confirmatory sample collection. The basement groundwater investigation involved sampling of the parking garage groundwater drainage system, as was performed as a means for

assessing whether historic petroleum releases may have occurred and potentially impacted site groundwater. Section 2.0 describes the investigation approach in greater detail.

1.2 PURPOSE AND SCOPE

This report presents the findings of the Phase II ESI for the subject property as well as ESI supporting documentation, including:

- A summary of work activities (Field Activity Daily Reports, Tailgate Health and Safety Meeting Forms, Equipment Calibration Logs, Soil/Groundwater Sample Collection Summary Logs, and Test Pit Excavation Logs);
- Analytical Data Summary Package; and
- Photographs depicting major project aspects.

2.0 PHASE II ENVIRONMENTAL SITE INVESTIGATION

A description of the Phase II ESI approach and field observations is presented below. All intrusive and sample collection activities were conducted in accordance with local, state and federal regulations as well as Benchmark's Standard Operating Procedures.

2.1 *EXTERIOR UST PETROLEUM RELEASE INVESTIGATION*

Although the 1999 ESA indicated the historic presence of underground storage tanks on the property, the specific locations of the USTs were not identified. Therefore, prior to initiating the test pit work Benchmark obtained copies of historic fire insurance (Sanborn) maps showing the subject property and surrounding parcels so as to better target the test pit locations. Sanborn maps were requested through Environmental Data Resources (EDR), Inc., which acquired assets of the Sanborn Map Company and its map archive in 1995. Sanborn map coverage was requested for the subject parcel through submission of both address and direct (interactive map) site location information. EDR supplied Sanborn map coverage for the property and immediately surrounding parcels for the years 1889, 1899, 1925, 1951, 1981, and 1986. Copies of these are presented in Attachment 1.

None of the Sanborn maps identified USTs on the subject property with the exception of the 1951 map, which indicated three (3) USTs in the surface lot near the Huron Street entrance. Three (3) test pits were marked for excavation at these UST locations based on scaled measurements from the southwest corner of the parking garage. Three (3) additional test locations were marked for excavation within the remainder of the lot to spot check for additional, unmapped tanks and/or evidence of petroleum contamination (see Figure 2).

On July 28, 2001, a total of six test pits were excavated at the six target areas identified above. The test pits were excavated with a Komatsu PC150 excavator until subsurface conditions became consistent, which generally occurred at a depth of 4.0

to 5.8 fbs. Discrete grab samples were collected and described by a Benchmark geologist for subsurface soil type and composition; visible or olfactory evidence of contamination; and moisture conditions. During test pit soil characterization, soil samples were screened for volatile organic vapors with a photoionization detector (PID). The PID is capable of detecting the presence of contaminants that emit volatile organic compounds such as petroleum products and solvents. No olfactory and/or visual evidence of petroleum-impacted soil/fill material was identified at any of the six test pit locations. PID scans of excavated soil for the six test pit locations did not detect any volatile organic compounds exceeding background concentrations (i.e., 0.0 ppm).

At each test pit location, Poorly Sorted Sand with Silt and Fill was present. Groundwater was not encountered at any of the locations. The fill material consisted of generally fine grained and loose soil with mixtures of brick and concrete. Test pit excavation logs are presented in Attachment 2. A summary of the field observations (i.e., lithology, dimensions, PID scan results etc.) at each test pit location is presented in Table 1.

In addition to visual and PID characterization of the test pits, the investigation also included the collection of discrete grab soil/fill samples from each test pit location, which were composited via equal weighted aliquots into one representative sample. Grab samples were collected with stainless steel sampling tools and temporarily placed in dedicated stainless steel bowls. Equal weight aliquots were then transferred to appropriate laboratory-supplied containers, and stored in an ice-chilled cooler. Samples were analyzed for NYSDEC STARS Memorandum volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) by USEPA Methods 8260 and 8270, respectively. A discussion of soil sample analytical results is presented in Section 3.0 of this report.

Following completion of the test pit program, the test pit excavations were backfilled to approximately 8 to 10-inches below grade with excavation spoils, followed by approximately 5 to 10-inches of clean select fill and compacted with a

small walk behind compactor. Final excavation backfill consisted of approximately 3-inches of base-binder asphalt patch compacted with a smooth drum roller to match the existing asphalt parking lot.

2.2 GROUNDWATER SAMPLE COLLECTION

One groundwater grab sample was collected from a groundwater drainage system located in the basement of the parking garage. Upon collection the sample was measured in the field for pH, temperature, specific conductance and turbidity. A summary of field measurements is presented in Table 3. A sample was also transferred to appropriate laboratory-supplied sample containers for analysis of NYSDEC STARS Memorandum VOCs by USEPA Method 8260. A discussion of groundwater sample analytical results is presented in Section 3.0 of this report.

2.3 PHOTOGRAPHS

Color photographs of major project aspects are presented in Attachment 3.

3.0 SAMPLING AND ANALYSIS

All subsurface soil/fill and groundwater samples were stored in appropriate laboratory-provided, pre-preserved containers, cooled to 4 °C in the field, and shipped under Chain-of-Custody to Philip Analytical Services Corp (PSC), located in Burlington, Ontario, Canada. A copy of the laboratory analytical report is presented in Attachment 4. PSC is a New York State Department of Health (NYSDOH) ELAP-certified laboratory.

3.1 *EVALUATION OF SOIL SAMPLE ANALYTICAL RESULTS*

Subsurface soil sample analytical results are summarized in Table 2. As indicated, only a limited number of VOCs were detected at trace concentrations, all of which are well below the TAGM 4046 Soil Cleanup Criteria. No SVOCs were detected in the sample.

3.2 *EVALUATION OF GROUNDWATER SAMPLE ANALYTICAL RESULTS*

Groundwater sample analytical results are summarized in Table 3. For comparison purposes, analytical results are presented with corresponding NYSDEC Class "GA" ambient groundwater quality standards and guidance values as published in NYSDEC Division of Water Technical Operation and Guidance series (TOGS) 1.1.1 (June 1998). As indicated, no VOCs were detected in the groundwater sample.

4.0 CONCLUSIONS

The Phase II investigation undertaken by Benchmark at 75-77 West Huron Street did not indicate the presence of remaining underground storage tanks or evidence of significant petroleum contamination in the areas investigated. As discussed in Sections 3.1 and 3.2, detected compounds were limited to trace levels of petroleum VOCs in the soil/fill sample, which were present well below NYSDEC recommended soil cleanup objectives.

5.0 DECLARATION/LIMITATIONS

This report has been prepared for the exclusive use of our client, Mr. Peter Burke. The contents of this report are limited to information available at the time of the site reconnaissance and to the scope of work and data referenced herein. The findings herein may be relied upon only at the discretion of Mr. Peter Burke. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Benchmark Environmental Engineering & Science, PLLC.

6.0 REFERENCES

New York State Department of Environmental Conservation, August 1992, *Spill Technology and Remediation Series, STARS Memo #1, Petroleum-Contaminated Soil Guidance Policy*.

New York State Department of Environmental Conservation, November 1992, *Technical and Administrative Guidelines Memorandum, Determination of Soil Cleanup Objectives and Cleanup Levels (TAGM #4046)*.

New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, June 1998, *Ambient Water Quality Standards and Guidance Values*

TABLES

TABLE 1

SUMMARY OF TEST PIT OBSERVATIONS

PHASE II INVESTIGATION
75-77 WEST HURON STREET
BUFFALO, NEW YORK

Test Pit	Location ¹		Width	Length	Depth	Approx. Depth To Groundwater	Odor	PID Scan	Visually Impacted?	Description of Soil/Fill ²
	Northing	Easting								
TP-1	5.0	-28.1	2.17	10.0	5.3	none	none	0.0	No	Concrete w/ sub-base over POORLY GRADED SAND W/ SILT
TP-2	27.5	-28.1	2.17	9.0	4.0	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT
TP-3	52.5	-28.1	2.17	9.0	5.0	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT and FILL
TP-4	120.5	-24.5	2.17	10.0	5.0	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT and FILL
TP-5	148.0	-23.2	2.17	9.0	5.0	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT and FILL
TP-6	166.0	-22.3	2.17	7.0	5.8	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT and FILL

Notes:

1. The site grid was established by Benchmark personnel using the SW corner of the parking garage as N0, E0. Coordinate location is based on center of each test pit.
2. FILL generally consisted of bricks, concrete and slag with black, moist, non-plastic fines.

TABLE 2

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

PHASE II INVESTIGATION
75-77 WEST HURON STREET
BUFFALO, NEW YORK

Parameter	Location/Result (mg/kg)	Rec. Soil Cleanup Objective ¹ (mg/kg)
	TP-Composite	
<i>PID Scan</i>		
Total VOCs (ppm)	0.0	--
<i>STARS Volatile Organic Compounds:</i>		
Benzene	0.012	0.06
Ethylbenzene	0.004	5.5
Toluene	0.028	1.5
o-Xylene	0.006	1.2
m&p-Xylene	0.019	1.2
Isopropylbenzene	<0.001	5.0
p-Isopropyltoluene	<0.001	11.0
n-Propylbenzene	<0.001	14.0
1,2,4-Trimethylbenzene	0.008	13.0
1,3,5-Trimethylbenzene	0.004	3.3
n-Butylbenzene	<0.001	18
sec-Butylbenzene	<0.001	25
tert-Butylbenzene	<0.001	--
<i>STARS Semi-Volatile Organic Compounds:</i>		
Acenaphthene	<0.14	50.0
Anthracene	<0.04	50.0
Benzo(a)anthracene	<0.04	0.224
Benzo(b)fluoranthene	<0.08	1.1
Benzo(k)fluoranthene	<0.08	1.1
Benzo(ghi)perylene	<0.08	50.0
Benzo(a)pyrene	<0.10	0.061
Chrysene	<0.06	0.4
Dibenzo(a,h)anthracene	<0.08	0.014
Fluoranthene	<0.04	50.0
Fluorene	<0.06	50.0
Indeno(1,2,3-cd)pyrene	<0.12	3.2
Phenanthrene	<0.06	50.0
Pyrene	<0.12	50.0
Naphthalene	<0.06	13.0

Notes:

1. NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) (effective January 24, 1994).



TABLE 3

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

PHASE II INVESTIGATION
75-77 WEST HURON STREET
BUFFALO, NEW YORK

Parameter	Location/Result (µg/kg)	NYSDEC Class "GA" GQS ^{1,2} (µg/L)
	SUMP-1	
<i>Field Measurements</i>		
pH (units)	7.31	6.5 - 8.5
Temperature (oC)	18.3	NA
Specific Conductance (mS)	2.34	NA
Turbidity (NTU)	2	NA
Odor (olfactory)	slight sulfur	NA
Appearance (visual)	clear	NA
<i>STARS Volatile Organic Compounds:</i>		
Benzene	<0.5	0.7
Ethylbenzene	<0.5	5
Toluene	<1	5
o-Xylene	<0.5	5
m-Xylene	<1.1	5
p-Xylene	<1.1	5
Total Xylenes	<1	5
Isopropylbenzene	<1	5
n-Propylbenzene	<1	5
1,2,4-Trimethylbenzene	<1	5
1,3,5-Trimethylbenzene	<1	5
n-Butylbenzene	<1	5
sec-Butylbenzene	<1	5
tert-Butylbenzene	<1	5

Notes:

1. NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) (effective January 24, 1994).
2. NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (effective June 1998).

FIGURES

Figure 1



SITE LOCATION MAP

PHASE II INVESTIGATION
77 WEST HURON STREET

EXCESS TEST PIT MATERIAL
STAGING AREA

AUTO PARKING

AUTO PARKING

HURON
GARAGE

- TP-6
- TP-5
- TP-4
- TP-3
- TP-2
- TP-1



FRANKLIN STREET

EXPLANATION

TP-1 TEST PIT LOCATION

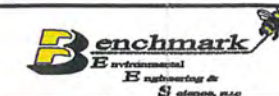
WEST HURON STREET



SCALE: 1 INCH = 40 FEET
SCALE IN FEET
(approximate)

BEAN ALLEY

SITE MAP
PHASE II INVESTIGATION
WEST HURON STREET GARAGE
77 WEST HURON ST., BUFFALO, NY

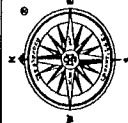


Project No.
2050-001-100

Figure
2

ATTACHMENT 1

SANBORN MAPS

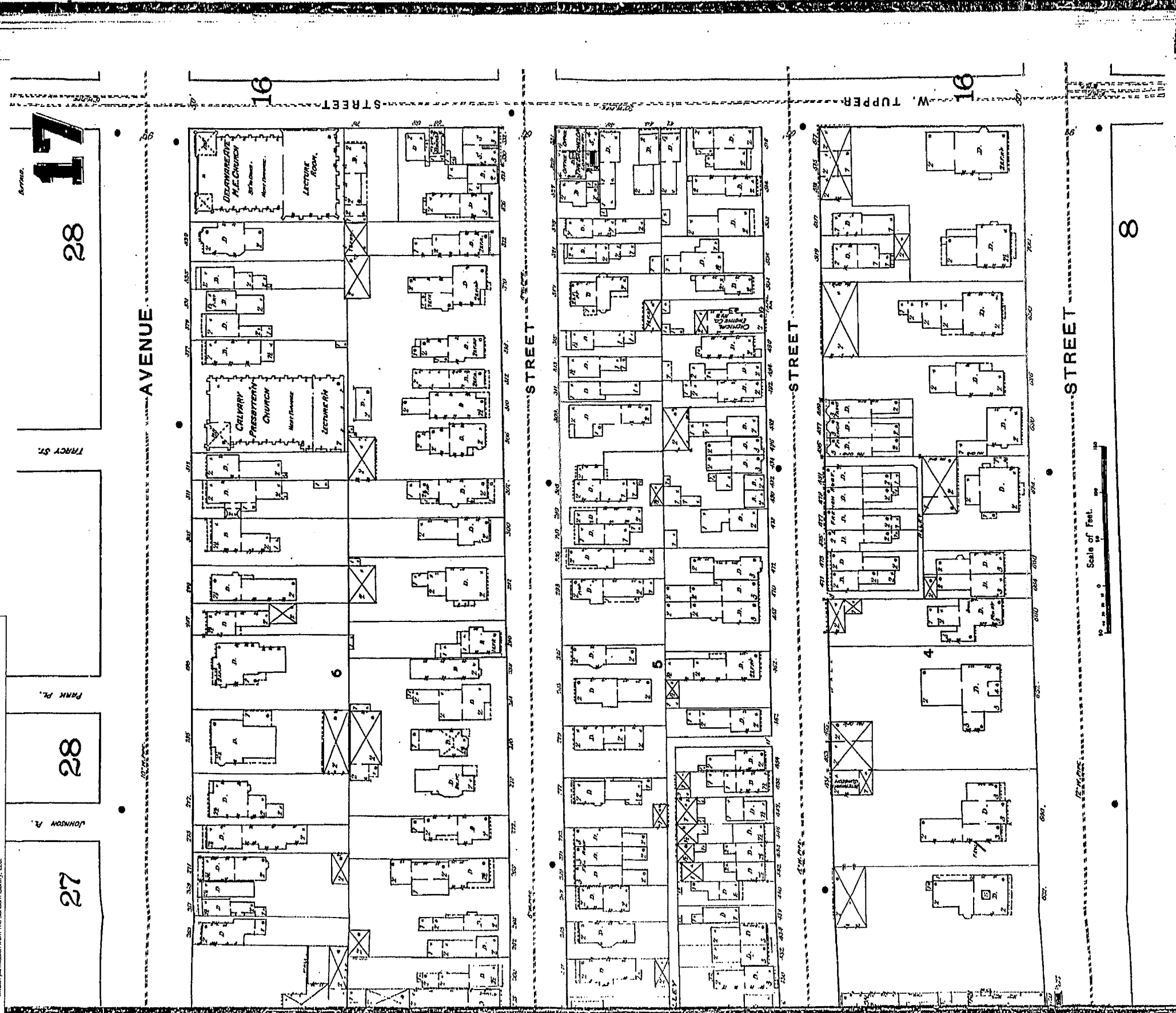


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17
28

TRACY ST.

PARK PL.

28

JOHNSON PL.

27

AVENUE

16

STREET

STREET

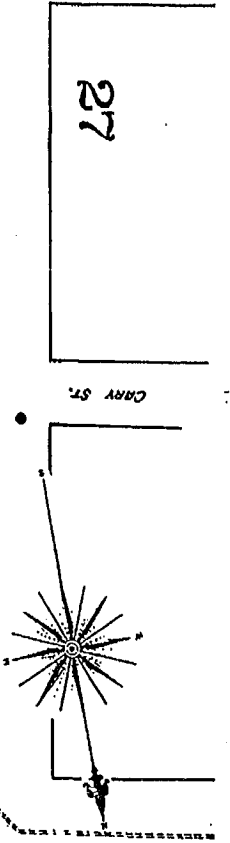
STREET

16
W. TUPPER STREET

STREET

8

Scale of Feet.
0 100 200 300 400 500 600 700 800 900 1000



27

27

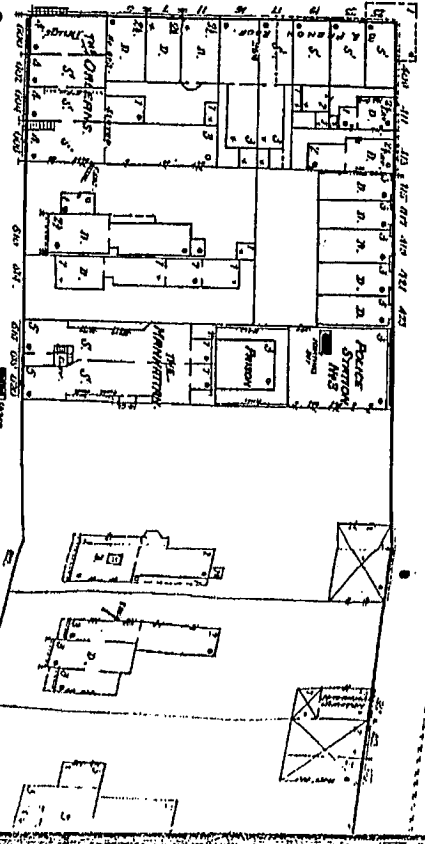
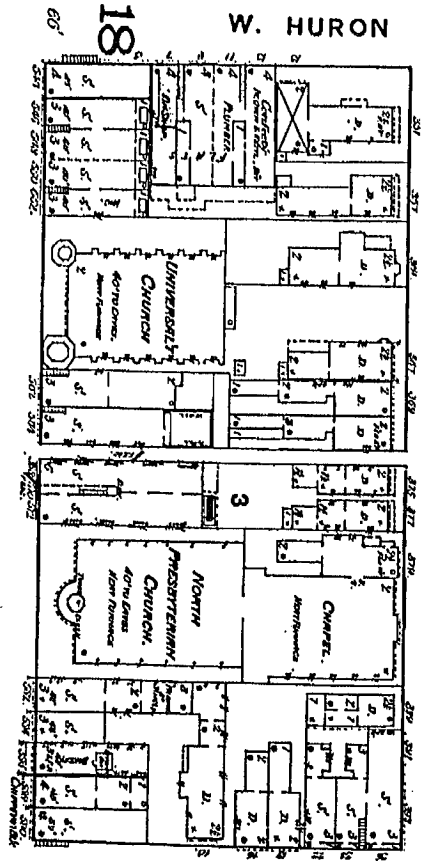
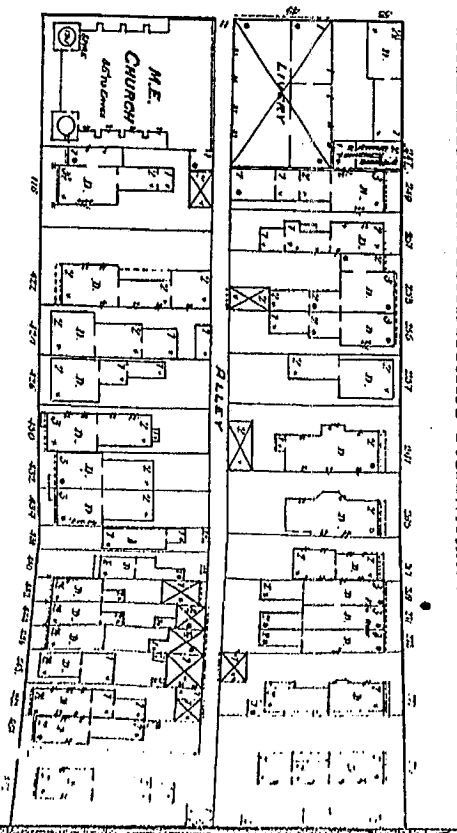
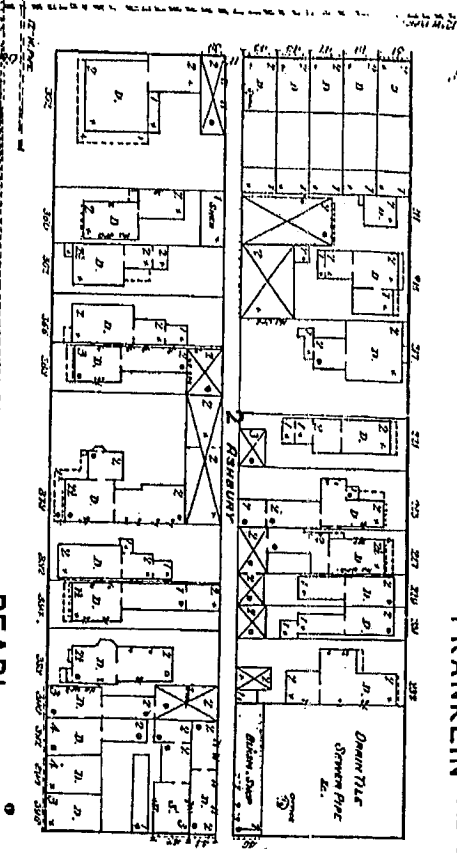
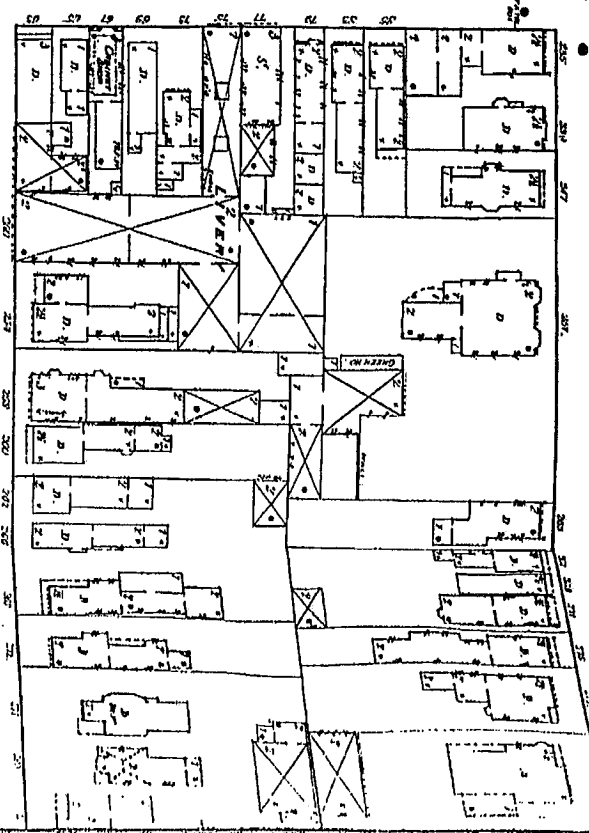
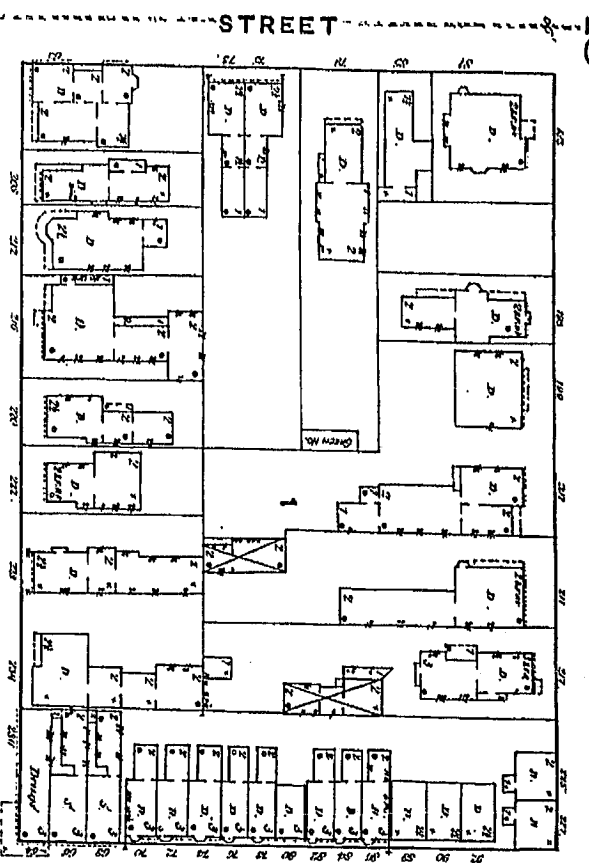
28

18

DELAWARE

CORRY ST.

JANINSON P.



STREET

STREET

W. HURON

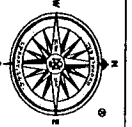
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MAIN

7

7

8



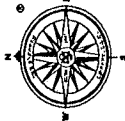
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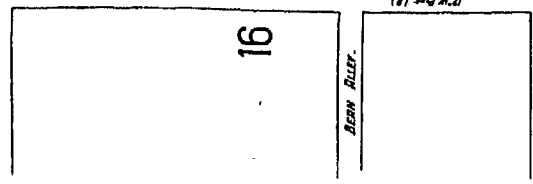
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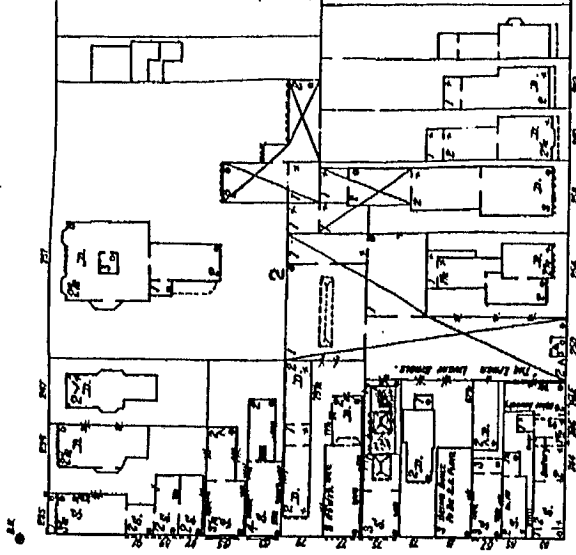
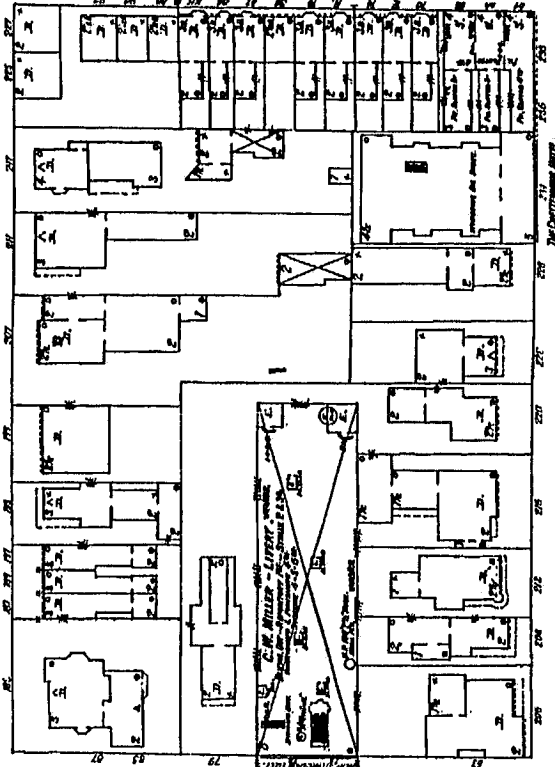
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25

DELAWARE AV.

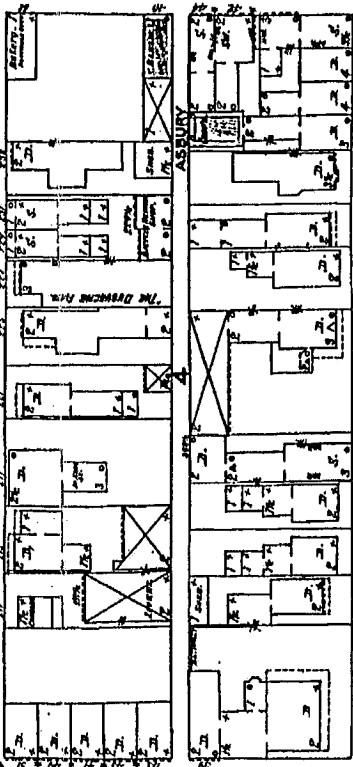


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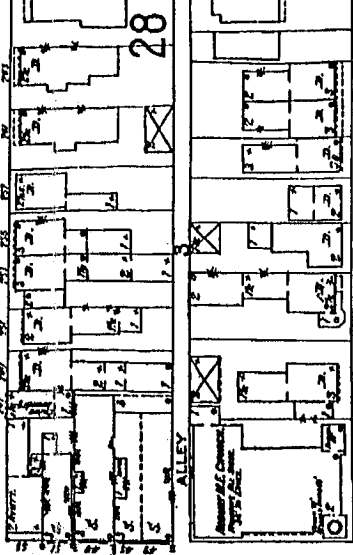


FRANKLIN

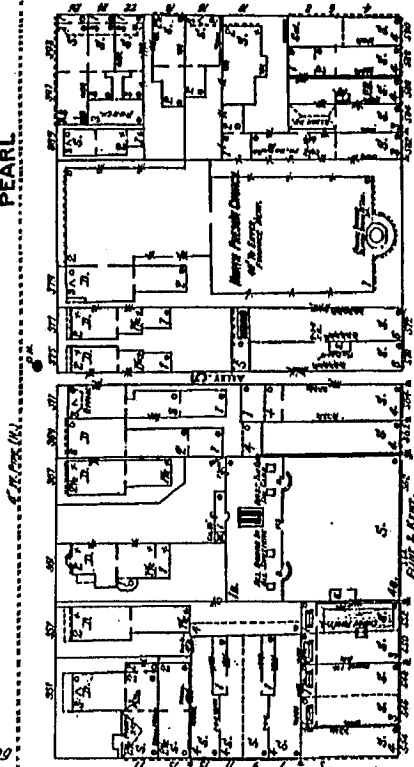
W. HURON



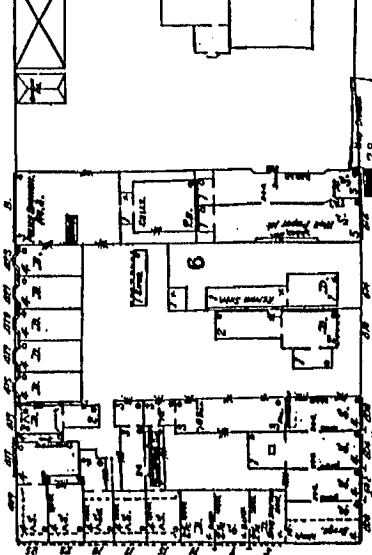
19



28

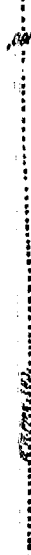


PEARL



26

MAIN

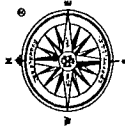


24

S E E S U I U M

T H R E E .

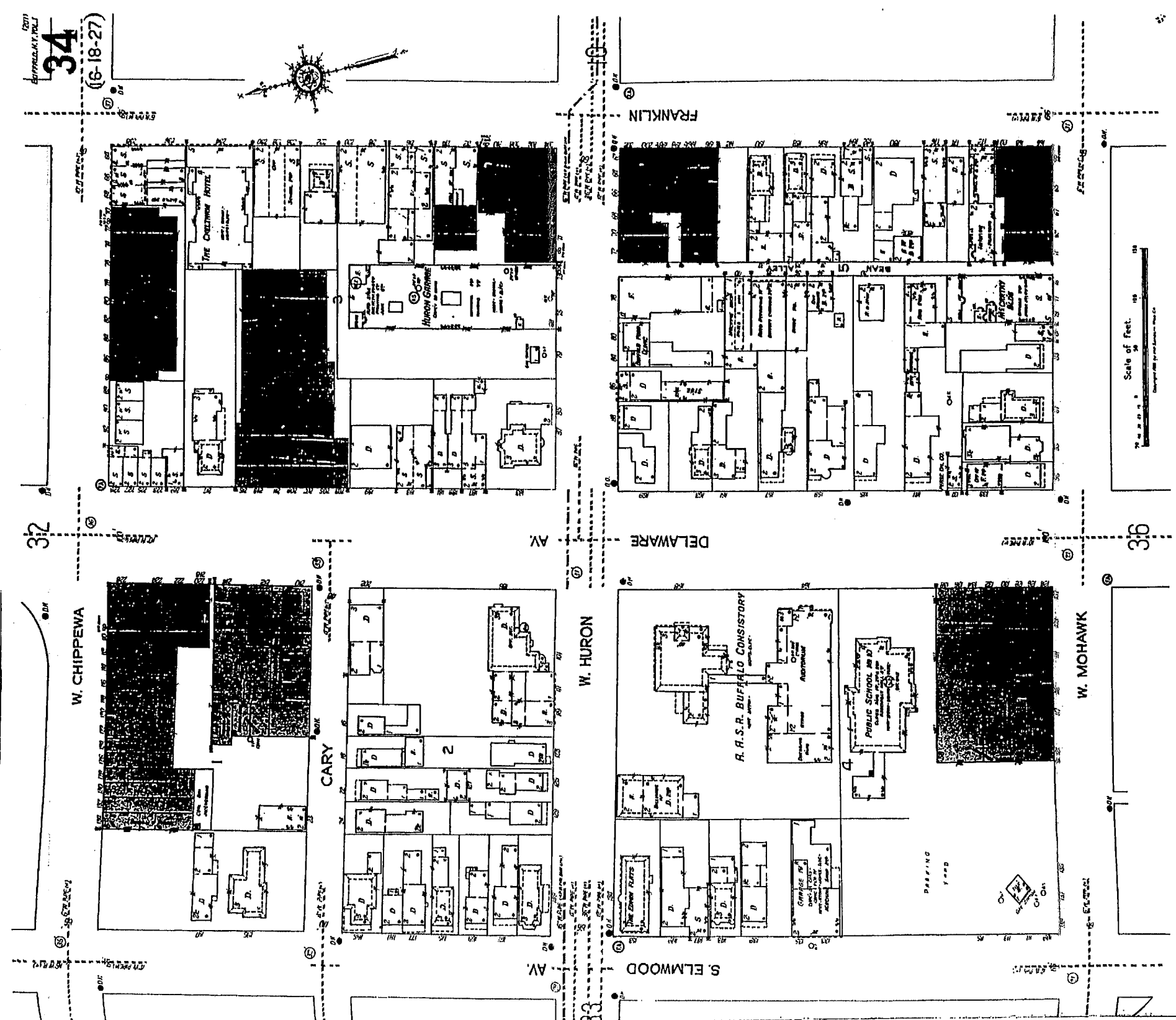
Scale of Feet



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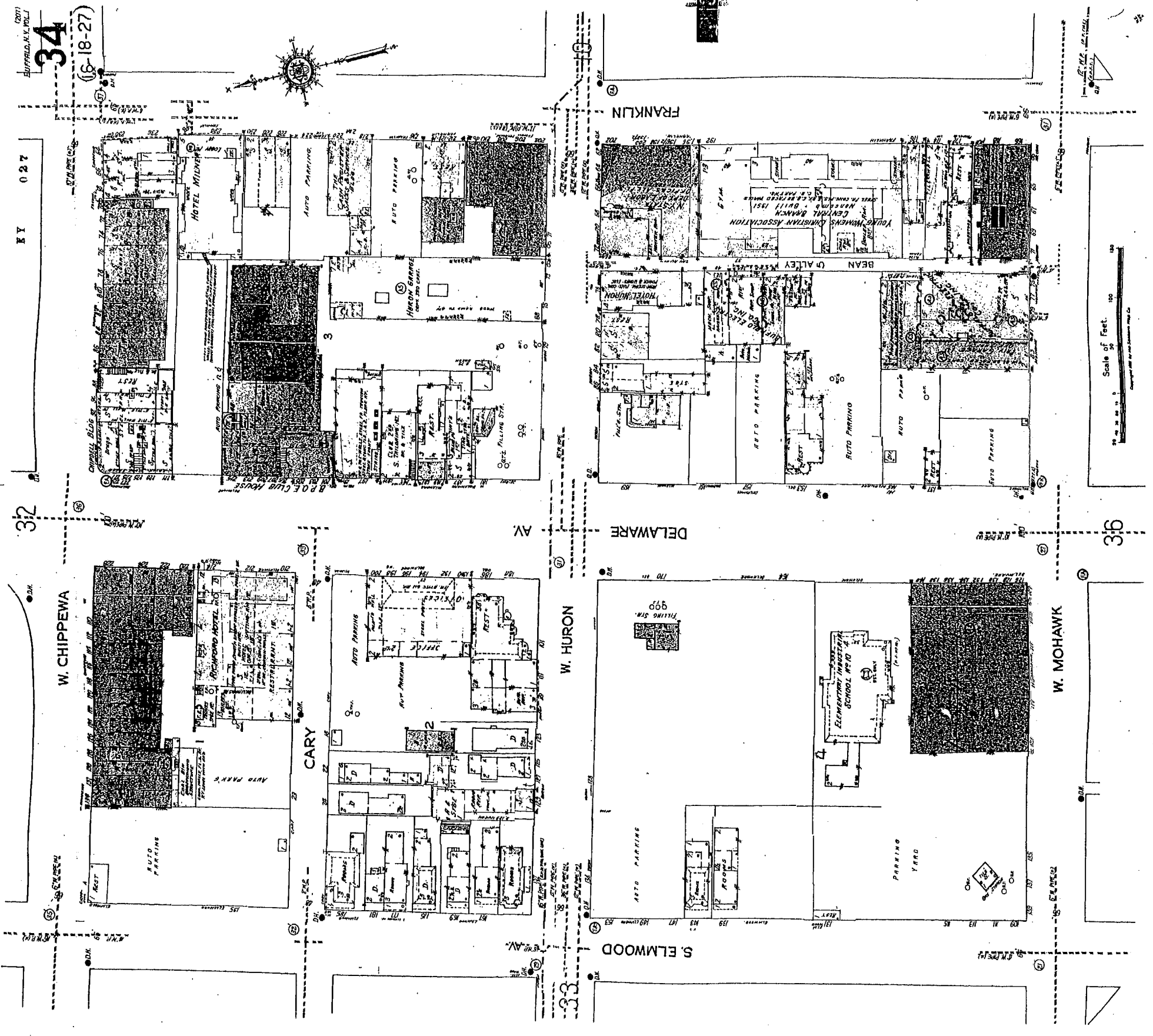
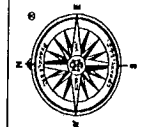


Scale of feet. 0 50 100

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BUFFALO, N.Y. 1911
34
 (8-18-27)

KY 0 27

32

W. CHIPPEWA

CARY

DELAWARE AV.

W. HURON

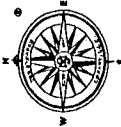
S. ELWOOD

FRANKLIN

W. MOHAWK

36

Scale of Feet: 100

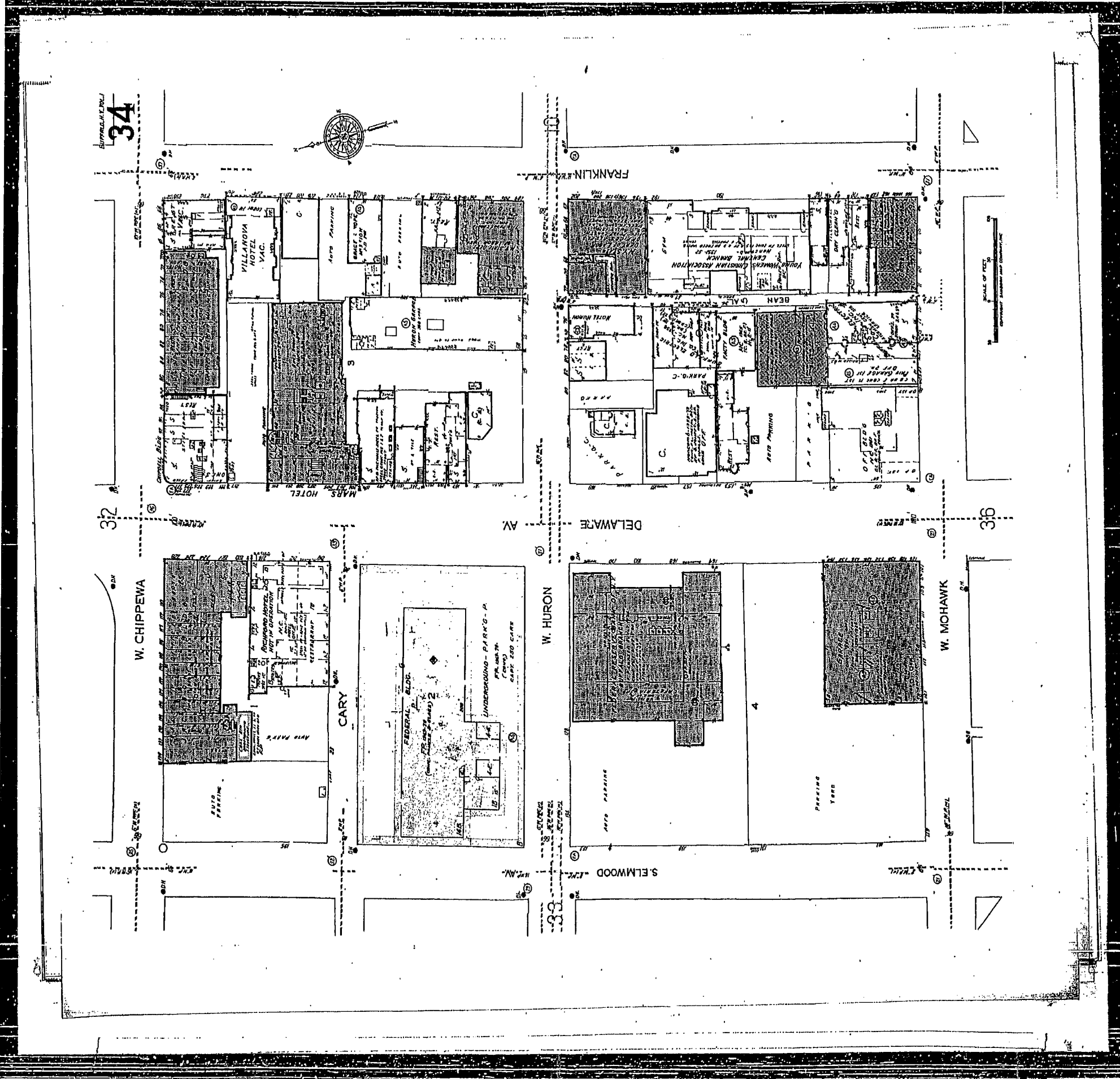


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ATTACHMENT 2

PROJECT FIELD FORMS



DAILY LOG	DATE	07	28	01
	NO.	0	0	1
	SHEET	1	OF	2

FIELD ACTIVITY DAILY LOG

PROJECT NAME: <u>Phase II Investigation</u>	PROJECT NO. <u>2050-001700</u>
PROJECT LOCATION: <u>77 West Huron Street</u>	CLIENT: <u>Peter Burke, esq.</u>
FIELD ACTIVITY SUBJECT: <u>Test Pitting</u>	

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS	
618	BM/TK on site (BCH)
640	BM/TK calibrated Photovac 2020 PID (see Equip. Calibration Log)
700	NC Contracting on site (Kurt S., Shawn S., Jon H.)
700 - 715	NC prepped for test pitting; equipment on site - Komatsu PC150 excavator, 7953 Bobcat and a 10-wheel (20 CY Dump Trailer) dump truck.
715 - 750	NC excavated TP-1 (closest to W. Huron Street)
730 - 1100	Peter Burke (client) on site
750 - 815	NC excavated TP-2
815 - 840	" " TP-3
840 - 900	" " TP-4
900 - 923	" " TP-5
923 - 938	" " TP-6
940 - 1000	BM/TK measured test pit locations relative to corners of building.
1010	BM/TK collected groundwater grab in basement of building/garage to be - sample location of (BCH) immediately adjacent to sump. Sample identified as SUMP-1 to be analyzed for STARS VOCs (8021) (see Groundwater Sample Collection Summary Log)
(BCH) 1012	
1012	BM/TK calibrated water quality field meters (see Equipment Calibration Log)
1015	BM/TK measured field parameters of groundwater SUMP-1 grab sample (see Water Quality Field Collection Log)

STARS VOCs (8021) +
STARS SVOCs (8270)

VISITORS ON SITE: Client: Peter Burke, esq. All-Right Parking: Mark?	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: <p style="text-align: center;">none</p>
--	---

WEATHER CONDITIONS: High clouds, partly sunny, sl. breeze (0-5 mph, NW), 60-70°F	IMPORTANT TELEPHONE CALLS: <p style="text-align: center;">none</p>
---	---

BM/TK PERSONNEL ON SITE: <u>Bryan Hanna (BCH)</u>	DATE: <u>7/28/01</u>
SIGNATURE: <u>Bryan Hanna</u>	



DAILY LOG	DATE	07	28	01
	NO.	0	0	1
	SHEET	2	OF	2

FIELD ACTIVITY DAILY LOG

PROJECT NAME: Phase II Investigation	PROJECT NO. 2050-001-100
PROJECT LOCATION: 77 West Huron Street	CLIENT: Peter Burke, esq.
FIELD ACTIVITY SUBJECT: Test Pitting	
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:	
1000 - 1100	<p>NC backfilled and compacted excavated soil/fill material into test pits. Excess excavated material was transported with a Bobcat to north end of garage. NC placed approx 6-inches of select fill and compacted in each test pit prior to asphalt surface completion.</p> <p>NC conducted site restoration activities (i.e., sweeping, shoveling, etc.)</p>
1030	<p>BMTK composited test pit soil grab samples of all six test pits identified as TP-Composite</p>
1100	<p>All off site</p>
<p>Laboratory: Phillip Analytical Services.</p>	



DAILY LOG	DATE	07	30	01
	NO.	0	0	2
	SHEET	1	OF	1

FIELD ACTIVITY DAILY LOG

PROJECT NAME: <i>Phase II Investigation</i>	PROJECT NO. <i>2050-001-100</i>
PROJECT LOCATION: <i>77 West Huron St.</i>	CLIENT: <i>Peter Burke, esq.</i>
FIELD ACTIVITY SUBJECT: <i>Test Pitting / Surface Completion</i>	
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:	
<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%; text-align: center;"> <i>Bm/TK on site to verify asphalt surface completion performed by NC. Asphalt patching appeared to be satisfactory.</i> </div>	
VISITORS ON SITE: <i>None (BCH) none</i>	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: <i>none</i>
WEATHER CONDITIONS: <i>Increasing sun, breezy, 65-80°F</i>	IMPORTANT TELEPHONE CALLS: <i>none</i>
BM/TK PERSONNEL ON SITE: <i>TOM Forbes. (THF)</i>	
SIGNATURE: <i>Bryan C. Hanna for THF</i>	DATE: <i>7/30/01</i>



TAILGATE SAFETY MEETING FORM

Project Name: W. Huron St. Garage - Phase II Date: 7/28/01 Time: _____
 Project Number: _____ Client: Peter Burke
 Work Activities: Test Pitting

HOSPITAL INFORMATION:

Name: Sheehan Memorial Hospital
 Address: Michigan Ave. City: Buffalo State: NY Zip: _____
 Phone No.: (716) Ambulance Phone No. 911

SAFETY TOPICS PRESENTED:

Chemical Hazards: none

Physical Hazards: Slips, Trips, Falls, open excavation

PERSONAL PROTECTIVE EQUIPMENT:

Activity: <u>Test Pitting</u>	PPE Level: <u>Level D</u>
Activity: _____	PPE Level: _____
Activity: _____	PPE Level: _____
Activity: _____	PPE Level: _____
Activity: _____	PPE Level: _____

New Equipment: none

Other Safety Topic (s): Environmental Hazards (aggressive fauna)
Eating, drinking, use of tobacco products is prohibited in the Exclusion Zone (EZ)

ATTENDEES

Name Printed
Jon B Holmes
Shawn M Sweeney
Russ Schweitzer
Bryan Hann

Signatures
Jon B Holmes
Shawn M Sweeney
Bryan Hann

Meeting conducted by: Bryan Hann (BM/TK)



EQUIPMENT CALIBRATION LOG

Job Name: Phase II Tail - 77 W. Hiram St.

Job No. 2050-001-100

Checked By: BCH Date: 7/28/01

Instrument Source: BM/TK Equipment Rental

Date/Time	Instrument Make/Model Serial #	Calibrated By	Standard/Manuf./Lot #/Cal. Method	Instrument Readings	Instrument Settings	Pass/Fail Description	Comments
7/28/01	Photovac 2020	BCH	zero open air	0.0	METER response factor: 1.0	Pass	ppm
↓	↓	↓	100 ppm Isobutylene gas	99.8	↓	Pass	ppm
10:12	Cole Parmer pH20 meter	↓	7.00	7.02	NA 7.02 BCH	Pass	pH units
↓	↓	↓	4.01	4.00	NA 4.00 BCH	Pass	pH units
↓	↓	↓	10.01	10.05	NA 10.05 BCH	Pass	pH units
↓	Myron L. Co. Conductivity meter	↓	Manual zero	0.0	NA	Pass	MS
↓	Hach 2100 P Turbidity Meter	↓	20	19	NA	Pass	NTU
↓	↓	↓	100	98	NA	Pass	NTU
↓	↓	↓	800	800	NA	Pass	NTU

Resolution for Instrument Failure: None



WATER QUALITY FIELD COLLECTION LOG

PROJECT INFORMATION

Project Name: Phase II Investigation
 Project No.: 2050-001-100
 Client: Peter Burke, esq.

SAMPLE DESCRIPTION

I.D.: SVMP-1
 Matrix: groundwater
 Location: 77 W. Huron Street

SAMPLE INFORMATION

Date Collected: 7/28/01
 Time Collected: 10:10
 Date Shipped to Lab: 7/28/01
 Collected By: BLH

LABORATORY ANALYSIS

- | | |
|-----------------------------------|--|
| <input type="checkbox"/> ROUTINE | <input checked="" type="checkbox"/> VOCs (STARS) |
| <input type="checkbox"/> BASELINE | <input type="checkbox"/> SVOCs |
| <input type="checkbox"/> EXPANDED | <input type="checkbox"/> PAHs |
| <input type="checkbox"/> METALS | <input type="checkbox"/> OTHER
(see below) |

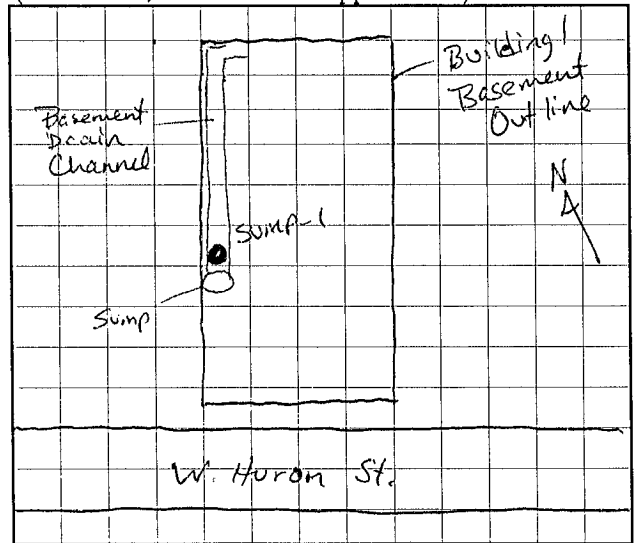
SAMPLING INFORMATION

Weather: High clouds, sl. breeze, partly sunny 60-70°F
 Air Temperature: 60-70°F
 Depth of Sample: Basement Drain Channel

Parameter	First	Last	Units
pH	7.31	NA	units
Temp.	18.3		°C
Cond.	2.34		mS us
Turbidity	2		NTU
Eh	—		mV
D.O.	—		ppm
Odor	sl. sulfur		olfactory
Appearance	clear		visual

LOCATION SKETCH

(not to scale, dimensions are approximate)



EXACT LOCATION (if applicable)

Northing (ft)	Easting (ft)	Elevation (fmsl)
NA	NA	NA

ADDITIONAL LABORATORY ANALYSIS: STARS VOCs (8021)

ADDITIONAL REMARKS: none

PREPARED BY: [Signature]

DATE: 7/28/01

SOIL/SEDIMENT SAMPLE COLLECTION SUMMARY LOG



Field ID	Location	QC Type	Depth (feet)		Analytical Parameters	Containers	Date	Time	Sampler Initials	Comments (e.g. problems encountered, ref. to variance, location changes, depth changes, important matrix observations or description, gravel thickness, etc.)
			from	to						
TP-1	W. Huron St.	NA	0.0	5.3						grab time = 7:40
TP-2			0.8	4.0						" " = 8:19
TP-3			1.4	5.0	STARS VOCs	250 ml amber	7/28/01	10:30	BCH	" " = 8:40
TP-4			0.5	5.0	STARS SVOCs	250 ml amber	7/28/01	10:30	BCH	" " = 8:58
TP-5			0.8	5.0						" " = 9:10
TP-6			1.1	5.8						" " = 9:32
TP-Composite	W. Huron St.	NA			STARS VOCs	250 ml amber	7/28/01	10:30	BCH	} 1 composite sample submitted to laboratory (Phillip Analytical)
"	"	"			STARS SVOCs	25 ml amber	7/28/01	10:30	BCH	

Equipment Rinsate Blanks - Pour clean deionized water over or through decontaminated sampling equipment into sample containers. Collect at a frequency of 1 per sampling method per day. Analyze for all those parameters analyzed for in the samples collected the same day. HSL Metals can be substituted by only the Metals analyzed for that day (except Hexavalent Chromium which needs a separate container). Match equipment used for constituents of concern to rinsate analyze. Note deionized water lot # or distilled water manufacturers info & date.

MS/MSD/MSB - Collect at a frequency of 1 per 20 samples of each matrix per day. Analyze for all those parameters analyzed for the samples collected the same day.

Field Blank - Pour clean deionized water (used as final decon rinse water) into sample containers while at the sampling site. Collect field blanks at a frequency of 1 per lot of deionized water. Note water lot number and dates in use for decon in 'Comments' section.

Investigation Derived Waste (IDW) Characterization samples - One composited sample from all drums of decon fluids and soil. Please note number of drums and labels on collection log.

Notes:

1. See QAPP for sampling frequency and actual number of QC samples.
2. CWM - clear, wide-mouth glass jar with Teflon-lined cap.
3. HDPE - high density polyethylene bottle.
4. MS/MSD/MSB - Matrix Spike, Matrix Spike Duplicate, Matrix Spike Blank.
5. BD - Blind Duplicate - indicate location of duplicate.

GROUNDWATER/SURFACE WATER SAMPLE COLLECTION SUMMARY LOG



Field ID	Location	QC Type	Depth (feet)		Analytical Parameters	Containers	Date	Time	Sampler Initials	Comments (e.g. problems encountered, ref. to variance, location changes, depth changes, important matrix observations or description, gravel thickness, etc.)
			from	to						
SAMP-1	BCK	NA	Basement		STARS VOCs (E021)	(3) 40ml glass vials	7/28/01	1010	BCH	Collected immediately adjacent to sump in Parking Garage Basement. Field Parameters: pH: 7.31 Cond: 2.34 mS Turb: 2 NTU Temp: 18.3 °C Appearance: clear Odor: slight sulfur
										Sample shipped via Courier to Phillip Analytical

Equipment Rinsate Blanks - Pour clean deionized water over or through decontaminated sampling equipment into sample containers. Collect at a frequency of 1 per sampling method per day. Analyze for all those parameters analyzed for in the samples collected the same day. HSL Metals can be substituted by only the Metals analyzed for that day (except Hexavalent Chromium which needs a separate container). Match equipment used for constituents of concern to rinsate analyte. Note deionized water lot # or distilled water manufacturers info & date.

MS/MSD/MSB - Collect at a frequency of 1 per 20 samples of each matrix per day. Analyze for all those parameters analyzed for the samples collected the same day.

Field Blank - Pour clean deionized water (used as final decon rinse water) into sample containers while at the sampling site. Collect field blanks at a frequency of 1 per lot of deionized water. Note water lot number and dates in use for decon in 'Comments' section.

Investigation Derived Waste (IDW) Characterization samples - One composited sample from all drums of decon fluids and soil. Please note number of drums and labels on collection log.

Notes:

1. See QAPP for sampling frequency and actual number of QC samples.
2. CWM - clear, wide-mouth glass jar with Teflon-lined cap.
3. HDPE - high density polyethylene bottle.
4. FD - Field Duplicate.
5. MS/MSD/MSB - Matrix Spike, Matrix Spike Duplicate, Matrix Spike Blank.
6. BD - Blind Duplicate.

CHAIN OF CUSTODY RECORD

Project No.		Project Name		No. of Cont	REMARKS
2050-001-100	Huron St. Garage				
Samplers (Signature)		Sample Identification		250 mL amber STARS VOLS	250 mL amber STARS SVCS
No.	Date	Time	grab		
1	7/28/01	1030	X	2	1
2		1010	X	3	3
Relinquished by: (Signature)		Date		Reinquished by: (Signature)	Time
<i>[Signature]</i>		7/31/01		DWD <i>[Signature]</i>	975
Relinquished by: (Signature)		Date		Reinquished by: (Signature)	Time
				REMARKS:	
				Standard TAT	

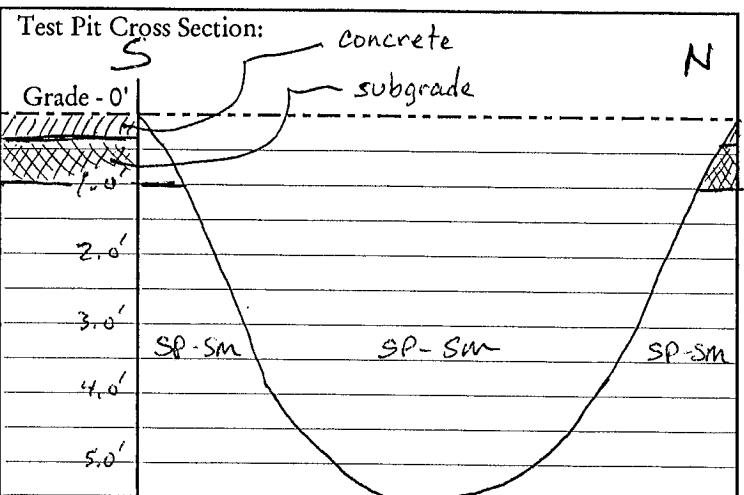
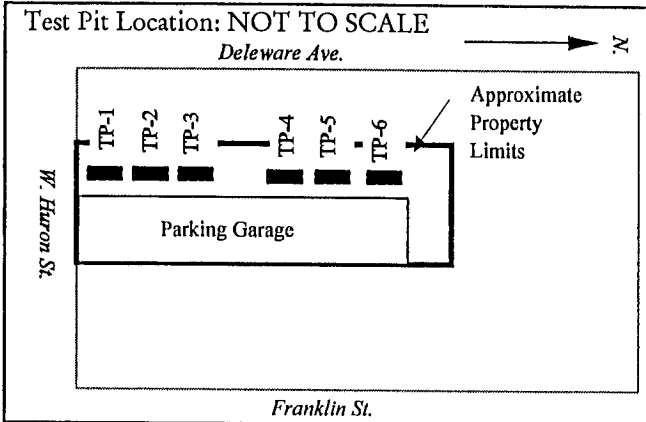




TEST PIT EXCAVATION LOG

Project: West Huron Street - Test Pit Excavation
 Project No.: 2050-001-100
 Client: Peter Burke, esq.
 Location: Buffalo, New York

Excavation Dates: 07/28/01
 Excavation Method: Komatsu PC150 Excavator
 Logged / Checked By: BCH
 Test Pit Location ID: TP- 1



TIME Length: 10' Depth: 5.33
 Start: 7:15 End: 7:50 Width: 2.27' (approx.)

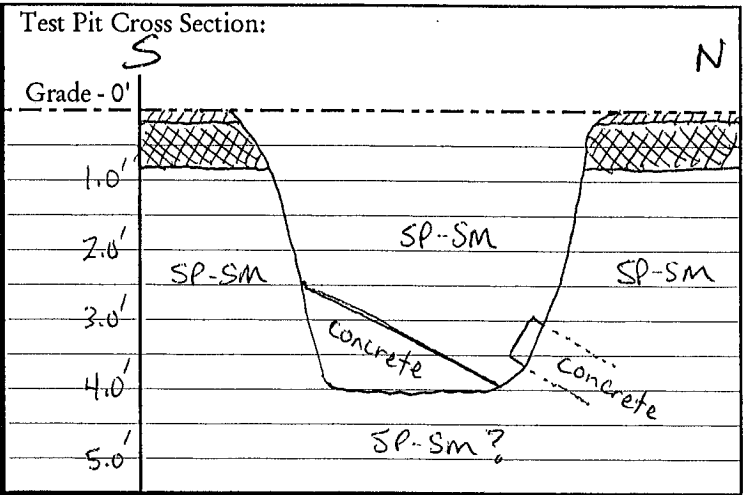
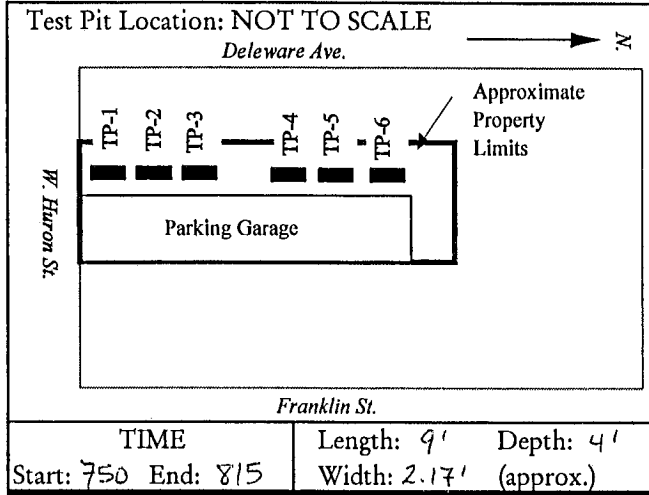
Depth fBGS	Soil Description	Graphic Log	Photos Y/N	Samples Y/N	Comments (Include seepage horizons)
0.0 - 0.4	concrete (at surface)		Y	N	
0.4 - 1.0	slag, black lines (non-plastic), broken concrete, v loose		Y	N	subgrade to concrete sample
1.0 - 5.33	POORLY GRADED SAND w/ SILT; Orange/brown grading to beige, moist, 90% f. sand, 10% non-plastic fines, loose PTD Scan = 0.0 ppm	SP-Sm	Y	Y	Grab to be composited w/ other test pits Collected 7:40 Am
	No odor				
	No groundwater				
	No visually impacted soil				
	NOTE: Encountered retired steel pipe (2.5-inch diam.) immediately below concrete. Angled from W. Huron St. toward garage building (45° angle).				



TEST PIT EXCAVATION LOG

Project: West Huron Street - Test Pit Excavation
 Project No.: 2050-001-100
 Client: Peter Burke, esq.
 Location: Buffalo, New York

Excavation Dates: 07/28/01
 Excavation Method: Komatsu PC150 Excavator
 Logged / Checked By: BCH
 Test Pit Location ID: TP- 2



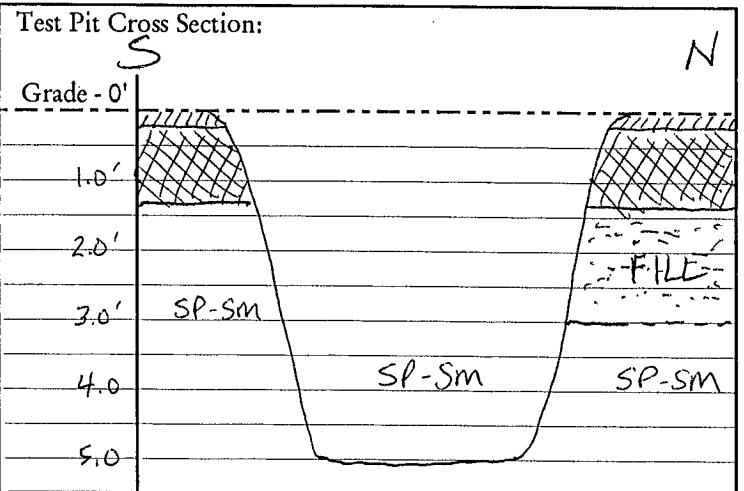
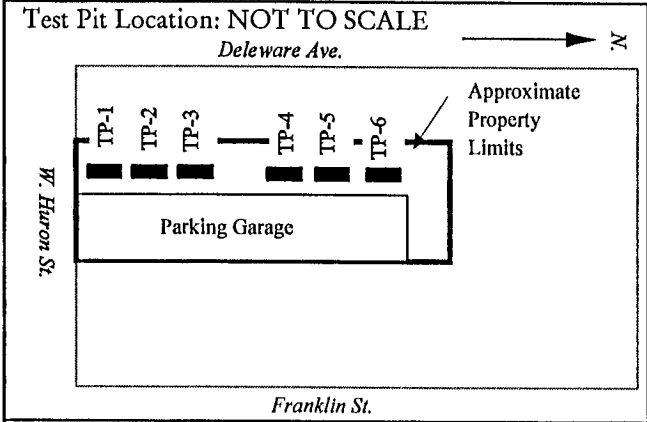
Depth f BGS	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 0.2	Asphalt (at surface)		Y	N	
0.2 - 0.8	Black, moist, coarse gravel/slag, w/ non plastic fines, loose	XXXXX	Y	N	Subgrade for concrete
0.8 - 4.0	POORLY GRADED SAND W/ SILT: Orange/brown, moist, 90% fine sand, 10% non-plastic fines, loose PID ₁ = 0.0 ppm Scan	SP-SM	Y	Y	Grab sample collected and composited with other test pit locations (8:19 Am).
	No odor				
	No groundwater				
	No visually impacted soil				
	NOTES:				
	① located 2.5-inch diam pipe from TP-1, broken and empty - backfilled in excavation				
	② Large concrete slab at bottom of excavation, possible former surface				



TEST PIT EXCAVATION LOG

Project: West Huron Street - Test Pit Excavation
 Project No.: 2050-001-100
 Client: Peter Burke, esq.
 Location: Buffalo, New York

Excavation Dates: 07/28/01
 Excavation Method: Komatsu PC150 Excavator
 Logged / Checked By: BCH
 Test Pit Location ID: TP- 3



TIME Length: 9' Depth: 5'
 Start: 8:15 End: 8:40 Width: 2.17' (approx.)

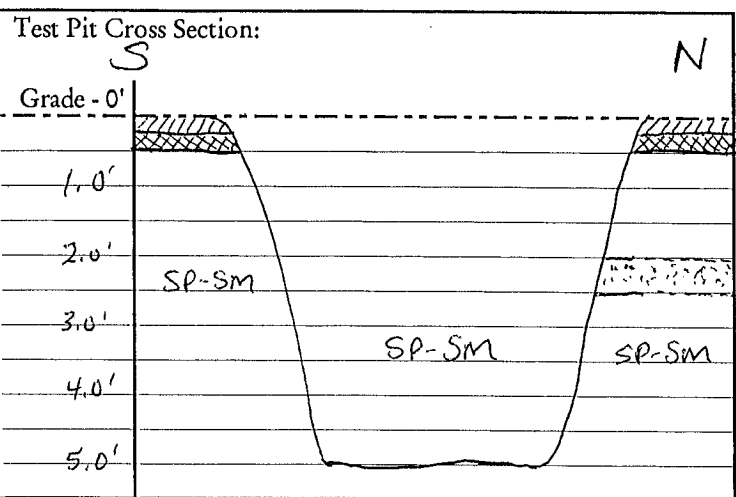
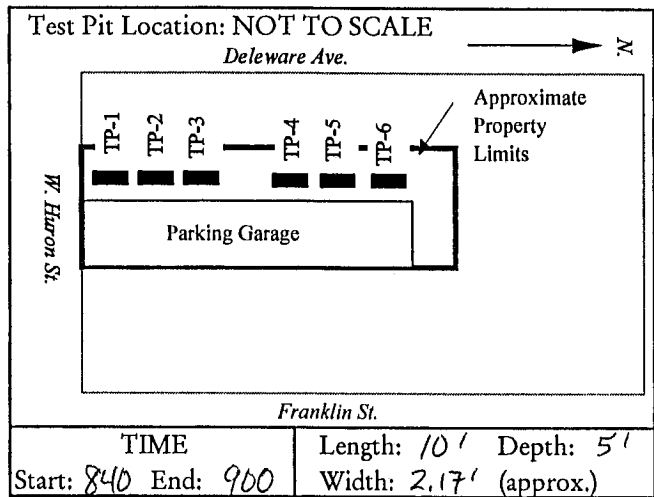
Depth fBGS	Soil Description	Graphic Log	Photos Y/N	Samples Y/N	Comments (Include seepage horizons)
0.0 - 0.2	Asphalt (at surface)		Y	N	
0.2 - 1.4	SUBGRADE: Black, C gravel w/ non plast. fines, loose		Y	N	
1.4 - 2.75	North end only FILL: brick, concrete, slag, mixed w/ non-plastic fines, loose		Y	N	North end of excavation only
1.4 - 5.0	POORLY GRADED SAND w/ SILT: Beige grading to orange/brown, moist, 90% fine sand, 10% non-plastic fines, loose w/ FILL - bricks/concrete PID Scan = 0.0 ppm	SP-sm	Y	Y	Grab sample collected & composited w/ other test pit locations (8:40 Am)
	NO odor				
	NO Groundwater				
	NO Visually Impacted soil				



TEST PIT EXCAVATION LOG

Project: West Huron Street - Test Pit Excavation
 Project No.: 2050-001-100
 Client: Peter Burke, esq.
 Location: Buffalo, New York

Excavation Dates: 07/28/01
 Excavation Method: Komatsu PC150 Excavator
 Logged / Checked By: BCH
 Test Pit Location ID: TP- 4



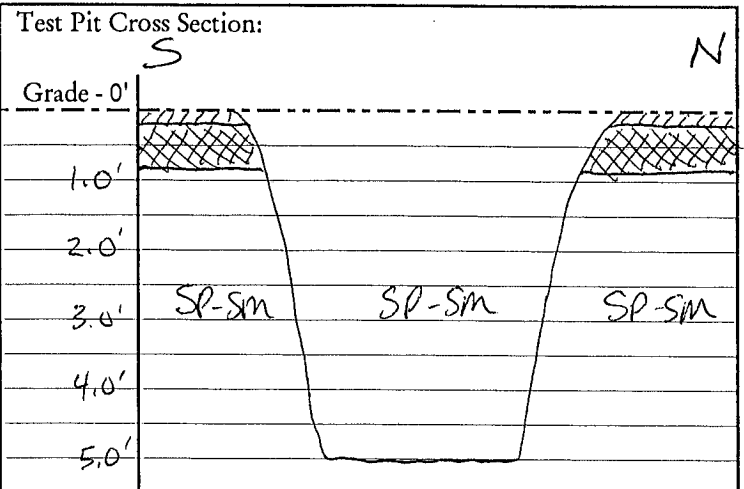
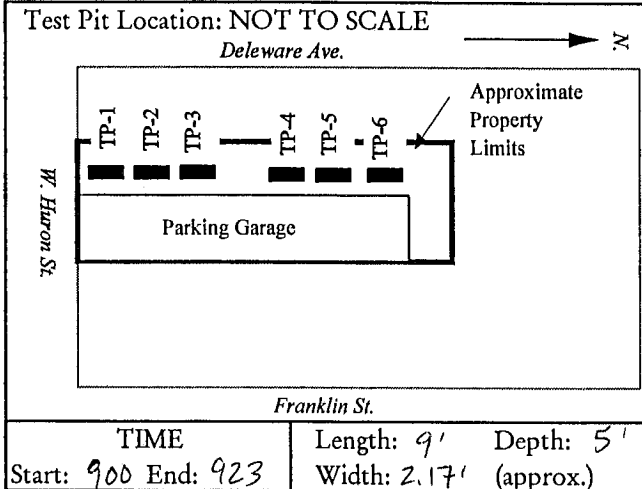
Depth FBS	Soil Description	Graphic Log	Photos Y/N	Samples Y/N	Comments (Include seepage horizons)
0.0-0.2	Asphalt (at Surface)	///////	Y	N	
0.2-0.5	SUBGRADE: Black, coarse gravel w/ non plastic fines, loose	#####	Y	N	
2.0-3.0	FILL: Black, moist, bricks, concrete, cobbles w/ non-plastic fines, loose	Y	N	North end of excavation only
0.5-5.0	POORLY GRADED SAND w/ SILT: Orange / brown, moist, 90% f. sand, 10% non-plast. fines, loose w/ FILL (bricks, concrete) PID Scan = 0.0 ppm	SP-SM	Y	Y	Grab sample collected + composited w/ other test pit locations (8:58 am)
	No odor				
	No Groundwater				
	No visually impacted soil				



TEST PIT EXCAVATION LOG

Project: West Huron Street - Test Pit Excavation
 Project No.: 2050-001-100
 Client: Peter Burke, esq.
 Location: Buffalo, New York

Excavation Dates: 07/28/01
 Excavation Method: Komatsu PC150 Excavator
 Logged / Checked By: BCH
 Test Pit Location ID: TP- 5



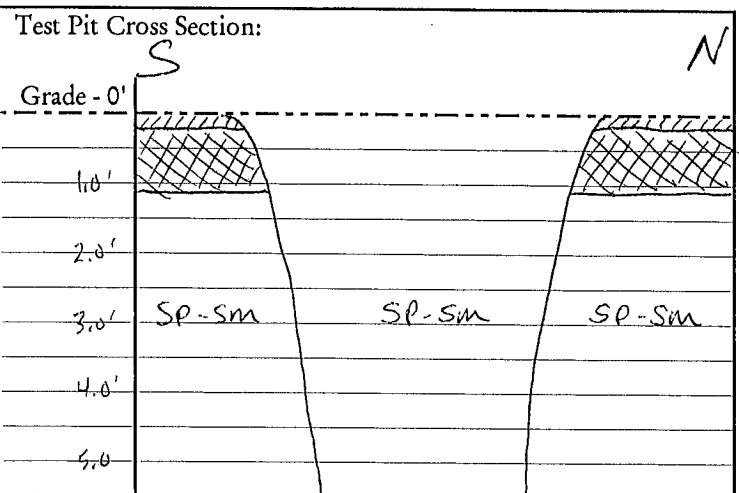
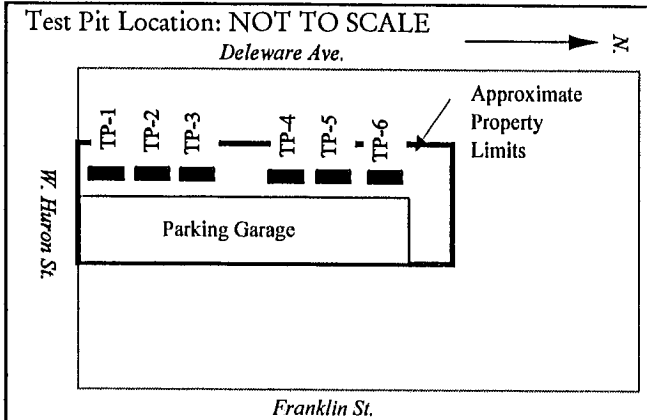
Depth f BGS	Soil Description	Graphic Log	Photos Y/N	Samples Y/N	Comments (Include seepage horizons)
0.0'-0.2'	Asphalt (at surface)		Y	N	
0.2'-0.83'	SUBGRADE: Black, moist, coarse gravel w/ non-plast. fines loose		Y	N	
0.83'-5.0'	POORLY GRADED SAND W/ SILT and FILL: dk orange/brown w/ beige, moist, 90% f. sand, 10% non-plast. fines, loose w/ bricks, concrete, coarse gravel PID Scan = 0.0 ppm	SP-Sm	Y	Y	Grab sample collected + composited w/ other test pit locations (9:10 AM)
	No odor				
	No groundwater				
	No visually impacted soil				



TEST PIT EXCAVATION LOG

Project: West Huron Street - Test Pit Excavation
 Project No.: 2050-001-100
 Client: Peter Burke, esq.
 Location: Buffalo, New York

Excavation Dates: 07/28/01
 Excavation Method: Komatsu PC150 Excavator
 Logged / Checked By: BCH
 Test Pit Location ID: TP-6



TIME
 Start: 9:23 End: 9:38
 Length: 7' Depth: 5.83'
 Width: 2.17 (approx.)

Depth fBGS	Soil Description	Graphic Log	Photos Y/N	Samples Y/N	Comments (Include seepage horizons)
0.0 - 0.21	Asphalt (at surface)	///////	Y	N	
0.21 - 1.13	SUBGRADE: Black, moist, coarse gravel w/ non-plast. fines, loose	#####	Y	N	
1.13 - 5.83	POORLY GRADED SAND w/ SILT: Orange/Brown, moist, 90% fine sand, 10% non-plastic fines, loose w/ FILL - bricks, concrete PID scan = 0.0 ppm	SP-SM	Y	Y	Grab sample collected & composited w/ other test pit locations (9:32am)
	NO odor				
	NO groundwater				
	NO visually impacted soil				



PHOTOGRAPHIC LOG FOR SAMPLING

Project: W. Huron St. - Phase II Invest.	Date: 07/31/01
Client: Peter Burke	Report No.: 01
Job No.: 2050-001-100	BM/TK Personnel: BCH
Film Roll Number: 1	

Date	Photo #	Direction	Description
7/28/01	01	W	TP-1; following backfill.
	02	S	" " "
	03	W	TP-2; " "
	04	N	TP-2 (foreground) + TP-3 then TP-4
	05	W	TP-3 following backfill
	06	N	TP-3 " "
	07	S	TP-4 during excavation
	08	E	TP-4 following backfill
	09	W	TP-4 " "
	10	W	TP-5 Beginning of ^{During} excavation
	11	SW	TP-5 During excavation
	12	S	TP-5 (foreground) + TP-4
	13	W	TP-6 Beginning of excavation
	14	S	TP-6 (foreground), TP-5 + TP-4
	15	S	" " "
	16	S	Backfilled ^{R to L} TP-6, TP-5, TP-4
	17	SW	Backfilled + compacted TP-1 (Typical)
	18	W	TP-2 Final grading prior to compaction (Typical)
	19	SW	TP-2 Site Site Restoration
	20	W	TP-3 Select gravel fill backfilling (Typical)
	21	SW	TP-1 Following compaction of select gravel fill (Typical)
	22	NW	TP-2 Prior to compaction " " " " "
	23	NW	TP-5 Compaction of select gravel fill (Typical)
↓	24	E	Staging Area for excess excavation material

Signed:

ATTACHMENT 3

PHOTOGRAPHS

PHOTO DESCRIPTIONS (Page 1 of 3)



Photo 01: Test Pit TP-1 showing typical backfill of excavated material by NC.



Photo 02: Test pits TP-2 (foreground), TP-3 and TP-4 locations and typical soil/fill lithology.

PHOTO DESCRIPTIONS (Page 2 of 3)



Photo 03: Test pits TP-6 (foreground), TP-5 and TP-4 locations and typical soil/fill lithology.



Photo 04: Test pit TP-1 showing typical backfill compaction with manual compactor.

ATTACHMENT 2

PHOTO DESCRIPTIONS (Page 3 of 3)



Photo 05: Test pit TP-5 showing typical select fill placement and compaction.



Photo 06: North end of parking garage showing staging area for excess excavation material.

ATTACHMENT 4

**PHILIP ANALYTICAL SERVICES, CORP.
ANALYTICAL DATA SUMMARY PACKAGE**



Certificate of Analysis

CLIENT INFORMATION

Attention: Tom Forbes
Client Name: Benchmark Environmental
Project:
Project Desc: Huron St. Garage

Address: Key Tower, 50 Fountain Plaza
Suite 1350
Buffalo, NY
14202

Fax Number:
Phone Number: 716 856-0599

LABORATORY INFORMATION

Contact: Ada Blythe, B.Sc., C.Chem.
Project: AN010894
Date Received: 31-Jul-2001
Date Reported: 16-Aug-2001

Submission No.: 1H0067
Sample No.: 043816 & 043821

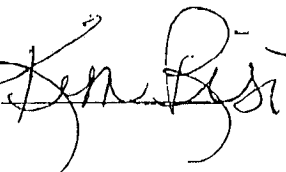
NOTES:

*'' = not analysed ' < ' = less than Method Detection Limit (MDL) 'NA' = no data available
LOQ can be determined for all analytes by multiplying the appropriate MDL X 3.33
Blank correction is only performed on oil and grease, BTEX, total purgeable hydrocarbons
and VOC analyses when Canadian methods are utilized.
Solids data is based on dry weight except for blota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope
dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)*

Methods used by PSC Analytical Services are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Nineteenth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PSC Analytical Services for a period of three weeks from receipt of data or as per contract.

COMMENTS:

Certified by: 



8/16/01

PASC - Certificate of Analysis

Page 2 of 4

Component	MDL	Units	Method	Blank	%	TP	
			Blank Soil	Spike	Recovery	Composite	
			<i>Client ID:</i>	043811 01	043811 01	043811 01	043816 01
			<i>Lab No.:</i>	043811 01	043811 01	043811 01	043816 01
			<i>Date Sampled:</i>	30-Jul-2001	30-Jul-2001	30-Jul-2001	28-Jul-2001
Benzene	0.001	mg/Kg	<	0.24	95	0.012	
Ethylbenzene	0.001	"	<	0.25	100	0.004	
Toluene	0.001	"	<	0.24	97	0.028	
m&p-Xylene	0.001	"	<	0.49	98	0.019	
o-Xylene	0.001	"	<	0.25	98	0.006	
Isopropylbenzene	0.001	"	<	0.24	97	<	
n-Butylbenzene	0.001	"	<	-	-	<	
sec-Butylbenzene	0.001	"	<	-	-	<	
tert-Butylbenzene	0.001	"	<	-	-	<	
n-Propylbenzene	0.001	"	<	-	-	<	
p-Isopropyltoluene	0.001	"	<	-	-	<	
1,2,4-Trimethylbenzene	0.001	"	<	-	-	0.008	
1,3,5-Trimethylbenzene	0.001	"	<	-	-	0.004	
Surrogate Recoveries		%					
d4-1,2-Dichloroethane			79	84	84	80	
d8-Toluene			89	90	90	91	
Bromofluorobenzene			87	90	90	82	

8/16/01

PASC - Certificate of Analysis

Page 3 of 4

Component	MDL	Units	Method	Blank	%	
			Blank Water	Spike	Recovery	SUMP-1
			043817 01	043817 01	043817 01	043821 01
			30-Jul-2001	30-Jul-2001	30-Jul-2001	30-Jul-2001
pH of VOC vials			7.00	-	-	1.50
Benzene	0.5	ug/L	<	52	100	<
Ethylbenzene	0.5	"	<	52	100	<
Toluene	1.0	"	<	52	100	<
m&p-Xylene	1.1	"	<	100	100	<
o-Xylene	0.5	"	<	51	100	<
Isopropylbenzene	1.0	"	<	50	100	<
n-Propylbenzene	1.0	"	<	51	100	<
1,3,5-Trimethylbenzene	1.0	"	<	51	100	<
tert-Butylbenzene	1.0	"	<	52	100	<
1,2,4-Trimethylbenzene	1.0	"	<	51	100	<
sec-Butylbenzene	1.0	"	<	51	100	<
p-Isopropyltoluene	1.0	"	<	53	110	<
n-Butylbenzene	1.0	"	<	54	110	<
Naphthalene	1.0	"	<	33	66	<
Surrogate Recoveries		%				
d4-1,2-Dichloroethane			104	103	103	110
d8-Toluene			101	100	100	101
Bromofluorobenzene			94	96	96	92

PASC - Certificate of Analysis

8/16/01

Component	MDL	Units	Client ID:		Method	Blank Spike	% Recovery	Blank Spike Duplicate	% Recovery	TP Composite
			Lab No.:	Date Sampled:						
Naphthalene	0.03	mg/Kg	043811 01	30-Jul-2001	43	NS	-	NS	-	<0.06
Acenaphthene	0.07	"	043811 01	30-Jul-2001	0.40	2.3	47	2.1	42	<0.14
Fluorene	0.03	"	043811 01	30-Jul-2001	<0.06	NS	-	NS	-	<0.06
Phenanthrene	0.03	"	043811 01	30-Jul-2001	0.30	NS	-	NS	-	<0.06
Anthracene	0.02	"	043811 01	30-Jul-2001	<0.04	NS	-	NS	-	<0.04
Fluoranthene	0.02	"	043811 01	30-Jul-2001	<0.04	NS	-	NS	-	<0.04
Pyrene	0.03	"	043811 01	30-Jul-2001	<0.06	0.39	7.9	0.32	6.4	<0.06
Benzo(a)anthracene	0.02	"	043811 01	30-Jul-2001	<0.04	NS	-	NS	-	<0.04
Chrysene	0.03	"	043811 01	30-Jul-2001	<0.06	NS	-	NS	-	<0.06
Benzo(b)fluoranthene	0.04	"	043811 01	30-Jul-2001	<0.08	NS	-	NS	-	<0.08
Benzo(k)fluoranthene	0.04	"	043811 01	30-Jul-2001	<0.08	NS	-	NS	-	<0.08
Benzo(a)pyrene	0.05	"	043811 01	30-Jul-2001	<0.10	NS	-	NS	-	<0.10
Indeno(1,2,3-cd)pyrene	0.06	"	043811 01	30-Jul-2001	<0.12	NS	-	NS	-	<0.12
Dibenzo(a,h)anthracene	0.04	"	043811 01	30-Jul-2001	<0.08	NS	-	NS	-	<0.08
Benzo(ghi)perylene	0.04	"	043811 01	30-Jul-2001	<0.08	NS	-	NS	-	<0.08
Surrogate Recoveries		%								
2-Fluorophenol					60	66	66	61	61	61
d5-PhenoI					64	43	43	35	35	70
d5-Nitrobenzene					60	70	70	66	66	72
2-Fluorobiphenyl					70	75	75	75	75	74
2,4,6-Tribromophenol					71	46	46	38	38	63
d14-p-Terphenyl					81	84	84	83	83	83

NS = Not Spiked

August 20, 2003

Ms. Francine Gallego
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203

AUG 23 2003

Re: 75-77 W. Huron Street, Buffalo, NY

Dear Ms. Gallego:

Enclosed for your review are two (2) copies of an Investigation Summary Report and Remedial Measures Work Plan for the above-referenced property.

Please contact us if you have any questions. We will schedule the work upon your approval of the Plan.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC



Thomas H. Forbes, P.E.
Project Manager

C: A. Russ, Phillips Lytle
R. Knoer, Knoer Crawford

0050-001-200

INVESTIGATION SUMMARY REPORT AND REMEDIAL MEASURES WORK PLAN

75-77 WEST HURON STREET
BUFFALO, NEW YORK

August 2003

0050-001-200

Prepared for

Huron Parking Services, Inc.



50 Fountain Plaza, Suite 1350 | Buffalo, NY 14202

**INVESTIGATION SUMMARY REPORT AND
REMEDIAL MEASURES WORK PLAN
75-77 WEST HURON STREET
BUFFALO, NY**

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Figure 2	2001 Site Investigation Locations
Figure 3	2003 Site Investigation Locations
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1.0 INTRODUCTION

1.1 Background

The property located at 75-77 West Huron Street, Buffalo, NY (commonly referred to as the Huron Street Garage) is comprised of an approximately 0.25 acre parcel containing an asphalt surface parking lot adjacent to a multi-level parking garage. The property is bounded on the north by an additional surface parking lot, to the east and west by commercial/office buildings, including a motor vehicle repair shop, and on the south by West Huron Street (Figure 1).

The current site owner, Huron Parking Services, Inc., is interested in selling the property. To address anticipated questions concerning environmental conditions on the site, a focused site investigation was completed by Benchmark Environmental Engineering & Science, PLLC (Benchmark) in August 2001 (Ref. 1). The investigation involved procurement and review of historic Sanborn maps to identify locations of former underground storage tanks (USTs) on the property, as well as excavation of test pits in the areas of the former tanks to determine if the vessels remained on site and to check for evidence of petroleum contamination in site soils. Groundwater was also characterized via sampling of an active dewatering sump in the basement of the garage. No indications of remaining tanks or significant releases were detected. A detailed description of Benchmark's investigation and findings is presented in Section 2.1, below.

A supplemental site investigation was completed on the subject property by GZA GeoEnvironmental of New York in July 2003. The investigation was performed on behalf of a prospective purchaser, and involved the advancement and sampling of a series of soil borings across the open lot adjacent to the parking ramp. Temporary groundwater wells were also installed and sampled at select boring locations. Indications of potential petroleum impacts were detected in the saturated zone along the southern side of the lot adjacent to West Huron Street. A summary of the GZA investigation is presented in Section 2.2.

1.2 Purpose and Scope

This report summarizes the findings of the above-described Site Investigations performed on the subject property and presents a planned approach for addressing petroleum constituents detected in subsurface, saturated soils by GZA GeoEnvironmental. Planned monitoring of the effectiveness of the remedial measures is also described.

2.0 PRIOR SITE INVESTIGATIONS

A description of the 2001 and 2003 investigation approach and findings are presented below.

2.1 2001 Site Investigation

The 2001 Site Investigation consisted of two parts: an exterior test pit investigation and a basement groundwater investigation. Prior to initiating the test pit work, Benchmark obtained copies of historic fire insurance (Sanborn) maps showing the subject property and surrounding parcels so as to better target the test pit locations. Sanborn maps were requested through Environmental Data Resources (EDR), Inc., which acquired assets of the Sanborn Map Company and its map archive in 1995. Sanborn map coverage was requested for the subject parcel through submission of both address and direct (interactive map) site location information. EDR supplied Sanborn map coverage for the property and immediately surrounding parcels for the years 1889, 1899, 1925, 1951, 1981, and 1986.

None of the Sanborn maps identified USTs on the subject property with the exception of the 1951 map, which indicated three (3) USTs in the surface lot near the Huron Street entrance. Three (3) test pits were marked for excavation at these UST locations based on scaled measurements from the southwest corner of the parking garage. Three (3) additional test locations were marked for excavation within the remainder of the lot to spot check for additional, unmapped tanks and/or evidence of petroleum contamination (see Figure 2).

On July 28, 2001, a total of six test pits were excavated at the six target areas identified above. The test pits were advanced until subsurface conditions became consistent, which generally occurred at a depth of 4.0 to 5.8 feet below ground surface (bgs). Discrete grab samples were collected and described by a Benchmark geologist for subsurface soil type and composition; visible or olfactory evidence of contamination; and moisture conditions. During test pit soil characterization, soil

samples were screened for volatile organic vapors with a photoionization detector (PID) fitted with a 10.6 eV lamp. No olfactory and/or visual evidence of petroleum-impacted soil/fill material was identified at any of the six test pit locations. PID scans of excavated soil for the six test pit locations did not detect any volatile organic compounds exceeding background concentrations (i.e., 0.0 ppm).

A summary of the field observations (i.e., lithology, dimensions, PID scan results etc.) at each test pit location is presented in Table 1.

In addition to visual and PID characterization of the test pits, the investigation also included the collection of discrete grab soil/fill samples from each test pit location, which were composited via equal weighted aliquots into one representative sample. Grab samples were collected with stainless steel sampling tools and temporarily placed in dedicated stainless steel bowls. Equal weight aliquots were then transferred to appropriate laboratory-supplied containers, and stored in an ice-chilled cooler. Samples were analyzed for NYSDEC STARS Memorandum volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) by USEPA Methods 8260 and 8270, respectively.

Following completion of the test pit program, the test pit excavations were backfilled and the surface was restored with approximately 3-inches of base-binder asphalt patch.

One groundwater grab sample was collected from a groundwater drainage system located in the basement of the parking garage. The drainage system is comprised of a north-south running trench drain and sump located along the western side of the basement (i.e., adjacent to the surface lot). The drainage system must remain active on a continuous basis to avoid flooding in the basement. Hence, the drain and sump act as a groundwater sink and likely effect a local, inward hydraulic gradient from the east and west sides of the property. Upon collection the sample was measured in the field for pH, temperature, specific conductance and turbidity. A sample was also transferred to appropriate laboratory-supplied sample containers for analysis of NYSDEC STARS Memorandum VOCs by USEPA Method 8260.

2.1.1 Analytical Results

All subsurface soil/fill and groundwater samples were stored in appropriate laboratory-provided, pre-preserved containers, cooled to 4 °C in the field, and shipped under Chain-of-Custody to Philip Analytical Services Corp (PSC), located in Burlington, Ontario, Canada. PSC is a New York State Department of Health (NYSDOH) ELAP-certified laboratory.

Subsurface soil sample analytical results are summarized in Table 2. As indicated, only a limited number of VOCs were detected at trace concentrations, all of which are well below the TAGM 4046 Soil Cleanup Criteria. No SVOCs were detected in the sample.

Groundwater sample analytical results are summarized in Table 3. For comparison purposes, analytical results are presented with corresponding NYSDEC Class "GA" ambient groundwater quality standards and guidance values as published in NYSDEC Division of Water Technical Operation and Guidance series (TOGS) 1.1.1 (June 1998). As indicated, no VOCs were detected in the groundwater sample.

2.2 2003 Site Investigation

The 2003 site investigation involved completion of ten (10) direct-push soil probes (see Figure 3 for locations). The soil probes were completed with a truck mounted Simco Earthprobe 200. Each probe was driven at continuous 48" intervals using a 2" diameter, 48" long macrocore sampler. The probes were advanced to depths of approximately 16 feet bgs, with the exception of B-2, which extended to 12 feet bgs and B-4, which was completed to 20 feet bgs. A dedicated acetate sampler liner was used between sampling intervals. Recovered soils were placed in 8-ounce glass jars for further classification and headspace analysis with a PID.

Subsurface conditions at the soil probe locations generally consisted of granular fill materials overlying native silty-sandy soils. The fill soils were generally limited to a depth of one to four feet bgs, with the exception of B-9 where fill

extended to 7 feet bgs. The fill consisted of fine to coarse sand with varying and lesser amounts of gravel, brick, concrete, slag and rubble. Apparent naturally-occurring silty sand was found below the fill material. Groundwater was typically encountered at a depth of 8 to 9 feet bgs in the southern portion of the site and from 10 to 12 feet bgs in the northern portion of the site.

Headspace screening results indicated elevated concentrations (greater than 5 ppm) in the saturated zone boring locations B-1 through B-4, and at Boring B-6. Based on the headspace screening results, soil samples from three of the borings were sent for laboratory testing: B-2 (9.5 to 12 feet bgs); B-4 (4 to 8 feet bgs); and B-6 (14.5 to 16 feet bgs).

Upon completion of the drilling of the soil probes, temporary 1" diameter PVC piezometers were installed at 3 of the ten probe locations: B-1, B-4 and B-7. From these piezometer locations, 3 ground water samples were collected using a disposable polyethylene bailer, placed in laboratory supplied analytical jars and sent for laboratory analysis. A slight sheen was identified in the saturated zone at B-4, however no indications of product/LNAPL were detected at any of the boring locations.

All soil and groundwater samples were submitted to the GZA GeoEnvironmental Laboratory in Hopkinton, Massachusetts for analysis of NYSDEC STARS List volatile and semi-volatile organic compounds.

2.2.1 Analytical Results

Analytical results for the soil and groundwater samples are presented in Tables 4 and 5, respectively. As indicated, no SVOCs were found in the soil samples taken from B-2, B-4 and B-6 at concentrations above the respective soil cleanup objectives, and no VOCs were detected in the sample analyzed from B-4. Data for soil samples taken from boring B-2 (9.2 to 12 feet bgs) and B-6 (14.5 to 16 feet bgs) indicated the presence of VOCs above their respective TAGM 4046 recommended soil cleanup objectives.

Groundwater sample analysis indicated the presence of VOCs in samples B-1 and B-4 at concentrations above NYSDEC Class GA groundwater criteria. No VOCs were detected at B-7. Naphthalene was the only Semi-volatile Organic Compound that was detected in all three samples that was above its respective groundwater criteria.

3.0 RECOMMENDED REMEDIAL APPROACH

As indicated in Sections 2.1 and 2.2, gasoline-impacted soils and groundwater are limited to the Southern portion of the surface parking lot and occur in the saturated zone at a significant depth beneath existing grade. Groundwater samples collected during the 2003 investigation exhibited no signs of product or LNAPL. Future site use plans call for continued use of this area of the property for parking or a consistent commercial use, hence the asphalt cover is anticipated to remain. In addition, site soils do not represent a contributing groundwater contamination source based on absence of evidence of contamination in the unsaturated overburden and the impervious nature of the asphalt parking area cover. Therefore, the primary concern is the fate and transport of previously-impacted groundwater to off-site sources. Based on active pumping of the basement sump in the ramp adjacent to the lot, local groundwater flow is likely to the east. However, regional groundwater flow is likely to the southwest toward Lake Erie. To assure that groundwater constituents will not pose an off-site threat and minimize disruption of site operations, it is recommended that Huron Parking Services employ an in-place (in-situ) program at the site. Specifically, it appears based on the size of the impacted area, the porous nature of the saturated zone and the types of petroleum constituents detected in the saturated soils and groundwater that oxygen supplementation technology presents a readily-implemented and cost-effective means to enhance natural biodegradation of the gasoline constituents found beneath the surface lot. This would be accomplished via the introduction of a continuous oxygen delivery source, such as Oxygen Release Compound (ORC[®]), to the impacted zone in the southern side of the property. ORC[®] is a proprietary technology developed by Regensis Bioremediation Products to enhance aerobic biodegradation of hydrocarbons such as toluene, xylene and other aromatic VOCs detected in the parking area. The active ingredient in ORC[®] is solid-phase magnesium peroxide, which slowly converts to magnesium hydroxide while releasing oxygen to the groundwater. Liberated oxygen is then distributed through

the aquifer by dispersion and diffusion. The ORC[®] is most efficiently introduced by injecting a slurry mixture with direct push boring rig.

Benchmark has evaluated the efficacy of an ORC[®] enhancement program at the site using manufacturer-supplied modeling software. Under conservative hydrogeologic and contaminant concentration assumptions, 300 lbs of ORC[®] injected in an evenly spaced grid across the approximately 50 x 100-foot impacted area of the parking lot is projected to reduce petroleum concentrations to at or near groundwater quality standards.

Monitoring of the ORC[®] efficacy would be accomplished with three (3) flush-mount monitoring wells located on the north, southeast and southwest sides of the impacted area as shown on Figure 4. The wells will be constructed as 2-inch PVC with 5-foot continuous slot screens installed across the top of the saturated zone. Samples for VOC analysis would be collected on a periodic basis following the ORC injection to verify parameter attenuation under varying water table conditions. Letter reports will be prepared following each event for NYSDEC review.

4.0 REFERENCES

1. Benchmark Environmental Engineering & Science, PLLC *Phase II Environmental Site Investigation Report. 75-77 West Huron Street Property. Buffalo, New York.* August 2001.
2. GZA GeoEnvironmental of New York. *Phase II Investigation - 75-77 West Huron Street, Buffalo, New York.* July 2003.
3. New York State Department of Environmental Conservation, August 1992, *Spill Technology and Remediation Series, STARS Memo #1, Petroleum-Contaminated Soil Guidance Policy.*
4. New York State Department of Environmental Conservation, November 1994, *Technical and Administrative Guidelines Memorandum, Determination of Soil Cleanup Objectives and Cleanup Levels (TAGM #4046).*
5. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, June 1998, *Ambient Water Quality Standards and Guidance Values*

TABLES

TABLE 1

SUMMARY OF 2001 TEST PIT OBSERVATIONS

PHASE II INVESTIGATION
75-77 WEST HURON STREET
BUFFALO, NEW YORK

Test Pit	Location ¹		Width	Length	Depth	Approx. Depth To Groundwater	Odor	PID Scan	Visually Impacted?	Description of Soil/Fill ²
	Northing	Easting								
TP-1	5.0	-28.1	2.17	10.0	5.3	none	none	0.0	No	Concrete w/ sub-base over POORLY GRADED SAND W/ SILT
TP-2	27.5	-28.1	2.17	9.0	4.0	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT
TP-3	52.5	-28.1	2.17	9.0	5.0	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT and FILL
TP-4	120.5	-24.5	2.17	10.0	5.0	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT and FILL
TP-5	148.0	-23.2	2.17	9.0	5.0	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT and FILL
TP-6	166.0	-22.3	2.17	7.0	5.8	none	none	0.0	No	Asphalt w/ sub-base over POORLY GRADED SAND W/ SILT and FILL

Notes:

1. The site grid was established by Benchmark personnel using the SW corner of the parking garage as N0, E0. Coordinate location is based on center of each test pit.
2. FILL generally consisted of bricks, concrete and slag with black, moist, non-plastic fines.

TABLE 2

SUMMARY OF 2001 SOIL SAMPLE ANALYTICAL RESULTS

PHASE II INVESTIGATION
75-77 WEST HURON STREET
BUFFALO, NEW YORK

Parameter	Location/Result (mg/kg)	Rec. Soil Cleanup Objective ¹ (mg/kg)
	TP-Composite	
<i>PID Scan</i>		
Total VOCs (ppm)	0.0	--
<i>STARS Volatile Organic Compounds:</i>		
Benzene	0.012	0.06
Ethylbenzene	0.004	5.5
Toluene	0.028	1.5
o-Xylene	0.006	1.2
m&p-Xylene	0.019	1.2
Isopropylbenzene	<0.001	5.0
p-Isopropyltoluene	<0.001	11.0
n-Propylbenzene	<0.001	14.0
1,2,4-Trimethylbenzene	0.008	13.0
1,3,5-Trimethylbenzene	0.004	3.3
n-Butylbenzene	<0.001	18
sec-Butylbenzene	<0.001	25
tert-Butylbenzene	<0.001	--
<i>STARS Semi-Volatile Organic Compounds:</i>		
Acenaphthene	<0.14	50.0
Anthracene	<0.04	50.0
Benzo(a)anthracene	<0.04	0.224
Benzo(b)fluoranthene	<0.08	1.1
Benzo(k)fluoranthene	<0.08	1.1
Benzo(ghi)perylene	<0.08	50.0
Benzo(a)pyrene	<0.10	0.061
Chrysene	<0.06	0.4
Dibenzo(a,h)anthracene	<0.08	0.014
Fluoranthene	<0.04	50.0
Fluorene	<0.06	50.0
Indeno(1,2,3-cd)pyrene	<0.12	3.2
Phenanthrene	<0.06	50.0
Pyrene	<0.12	50.0
Naphthalene	<0.06	13.0

Notes:

1. NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) (effective January 24, 1994).

TABLE 3

SUMMARY OF 2001 GROUNDWATER SAMPLE ANALYTICAL RESULTS

PHASE II INVESTIGATION
75-77 WEST HURON STREET
BUFFALO, NEW YORK

Parameter	Location/Result ($\mu\text{g}/\text{kg}$)	NYSDEC Class "GA" GQS ^{1,2} ($\mu\text{g}/\text{L}$)
	SUMP-1	
<i>Field Measurements</i>		
pH (units)	7.31	6.5 - 8.5
Temperature (oC)	18.3	NA
Specific Conductance (mS)	2.34	NA
Turbidity (NTU)	2	NA
Odor (olfactory)	slight sulfur	NA
Appearance (visual)	clear	NA
<i>STARS Volatile Organic Compounds:</i>		
Benzene	<0.5	0.7
Ethylbenzene	<0.5	5
Toluene	<1	5
o-Xylene	<0.5	5
m-Xylene	<1.1	5
p-Xylene	<1.1	5
Total Xylenes	<1	5
Isopropylbenzene	<1	5
n-Propylbenzene	<1	5
1,2,4-Trimethylbenzene	<1	5
1,3,5-Trimethylbenzene	<1	5
n-Butylbenzene	<1	5
sec-Butylbenzene	<1	5
tert-Butylbenzene	<1	5

Notes:

1. NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) (effective January 24, 1994).
2. NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (effective June 1998).

Table 4
 Summary of 2003 Soil Sample Analytical Results
 Parking Garage
 75 – 77 West Huron
 Buffalo, New York

Parameter	NYSDEC TAGM 4046 RSCO	B-2 9.5 to 12 feet bgs	B-4 4 to 8 feet bgs	B-6 14.5 to 16 feet bgs
Volatile Organic Compounds - EPA Method 8260 STARS (ug/kg)				
Toluene	1,500	36,000		950
Ethylbenzene	5,500	20,000		210
m,p-Xylene	1,200	81,000		12,000
o-Xylene	1,200	31,000		660
Isopropylbenzene	5,000	3,900		10,000
n-Propylbenzene	14,000	12,000		34,000
1,3,5-Trimethylbenzene	3,300	22,000		49,000
1,2,4-Trimethylbenzene	13,000	66,000		190,000
sec-Butylbenzene	25,000	1,700		970
p-Isopropyltoluene	11,000	2,000		4,100
n-Butylbenzene	18,000			34,000
Naphthalene	13,000	19,000		
Total VOCs		294,600		335,890
Semi-Volatile Organic Compounds - EPA Method 8270 STARS (ug/kg)				
Naphthalene	13,000	12,000		5,700
2-Methylnaphthalene	36,400	13,000		15,000
Notes:				
1. Compounds detected in one or more samples are presented on this table. Refer to Attachment C for list of all compounds included in analysis.				
2. Analytical testing completed by GZA GeoEnvironmental Laboratory.				
3. Recommended Soil cleanup objectives (RSCOs) based on the NYSDEC TAGM 4046 Determination of Soil Cleanup Levels dated January 1994.				
4. ug/kg = part per billion (ppb) a				
5. Blank indicates compound was not detected.				
6. NT = not tested				
7. SB = Site Background				
8. NV = no value				
9. MDL = method detection limit				

1 Adopted from GZA Geoenvironmental Phase II Investigation, 75 – 77 West Huron Street Buffalo, New York; July 2003

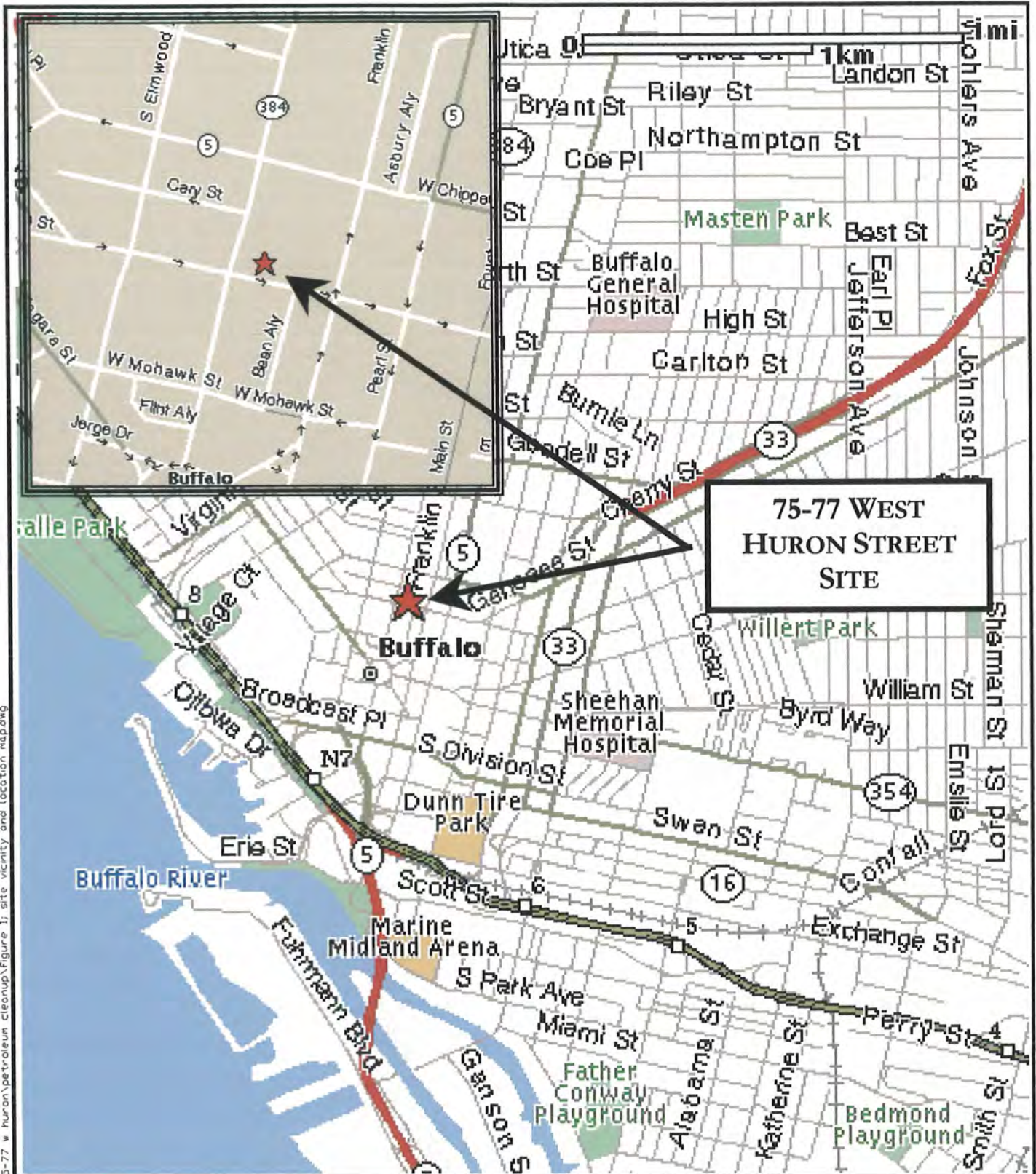
Table 5
 Summary of 2003 Soil Sample Analytical Results
 Parking Garage
 75 – 77 West Huron
 Buffalo, New York

Parameter	Class GA Criteria	B-1	B-4	B-7
Volatile Organic Compounds - EPA Method 8260 STARS (ug/L)				
Benzene	1	21		
Toluene	5	290	23	
Ethylbenzene	5	400	180	
m&p-Xylene	5	90	860	
o-Xylene	5	120	240	
Isopropylbenzene	5	43	48	
N-propylbenzene	5	75	180	
1,3,5-Trimethylbenzene	5	69	280	
1,2,4-Trimethylbenzene	5	96	1200	
sec-Butylbenzene	5	5	16	
p-Isopropyltoluene	5	84	41	
Naphthalene	10	190	200	
Total VOCs		1407	3268	
Semi-Volatile Organic Compounds - EPA Method 8270 STARS (ug/L)				
Naphthalene	10	120	130	
2-Methylnaphthalene	NV	28	300	
Acenaphthene	NV		0.24 J	
Fluorene	NV		1.1 J	
Phenanthrene	NV		1.1 J	
Notes:				
1. Compounds detected in one or more samples are presented on this table. Refer to Attachment C for list of all compounds included in analysis.				
2. Analytical testing completed by GZA GeoEnvironmental Laboratory.				
3. NYSDEC Class GA criteria obtained from Division of Water Technical and Operational Guidance Series (TOGS 1.1.1), June 1998.				
4. ug/L = part per billion (ppb)				
5. NV = no value				
6. Blank indicates compound was not detected.				
7. J = estimated concentration				

2 Adopted from GZA Geoenvironmental Phase II Investigation, 75 – 77 West Huron Street Buffalo, New York; July 2003

FIGURES

FIGURE 1



**75-77 WEST
HURON STREET
SITE**

FILEPATH:\benchmark\cod\burke\75-77 w huron\petroleum cleanup\Figure 1; site vicinity and location map.dwg



50 FOUNTAIN PLAZA
SUITE 1350
BUFFALO, NEW YORK 14202
(716) 856-0599

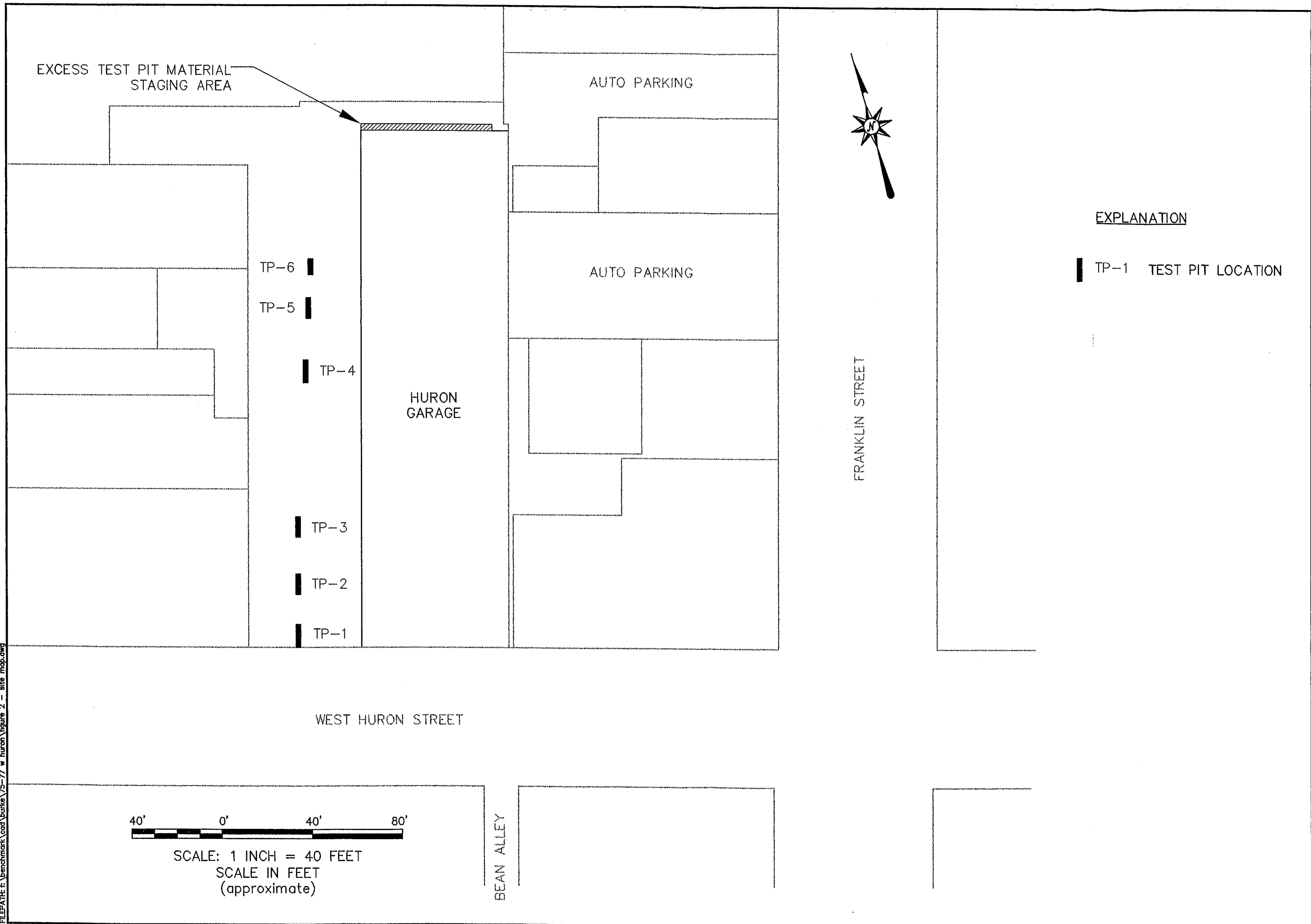
SITE VICINITY AND LOCATION MAP
INVESTIGATION SUMMARY REPORT & RM WORK PLAN

75-77 WEST HURON STREET
BUFFALO, NEW YORK

PREPARED FOR
PETER J. BURKE, ESQ.

PROJECT NO.: 0050-001-200
DATE: AUGUST 2003
DRAFTED BY: BCH

DATE: AUGUST 2003
DRAFTED BY: BCH
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SITE MAP

INVESTIGATION SUMMARY REPORT & REMEDIAL MEASURES WORK PLAN

75-77 WEST HURON STREET
BUFFALO, NEW YORK

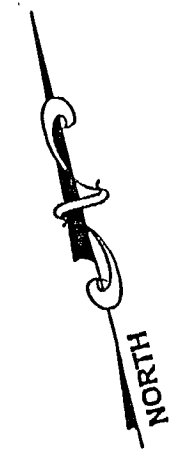
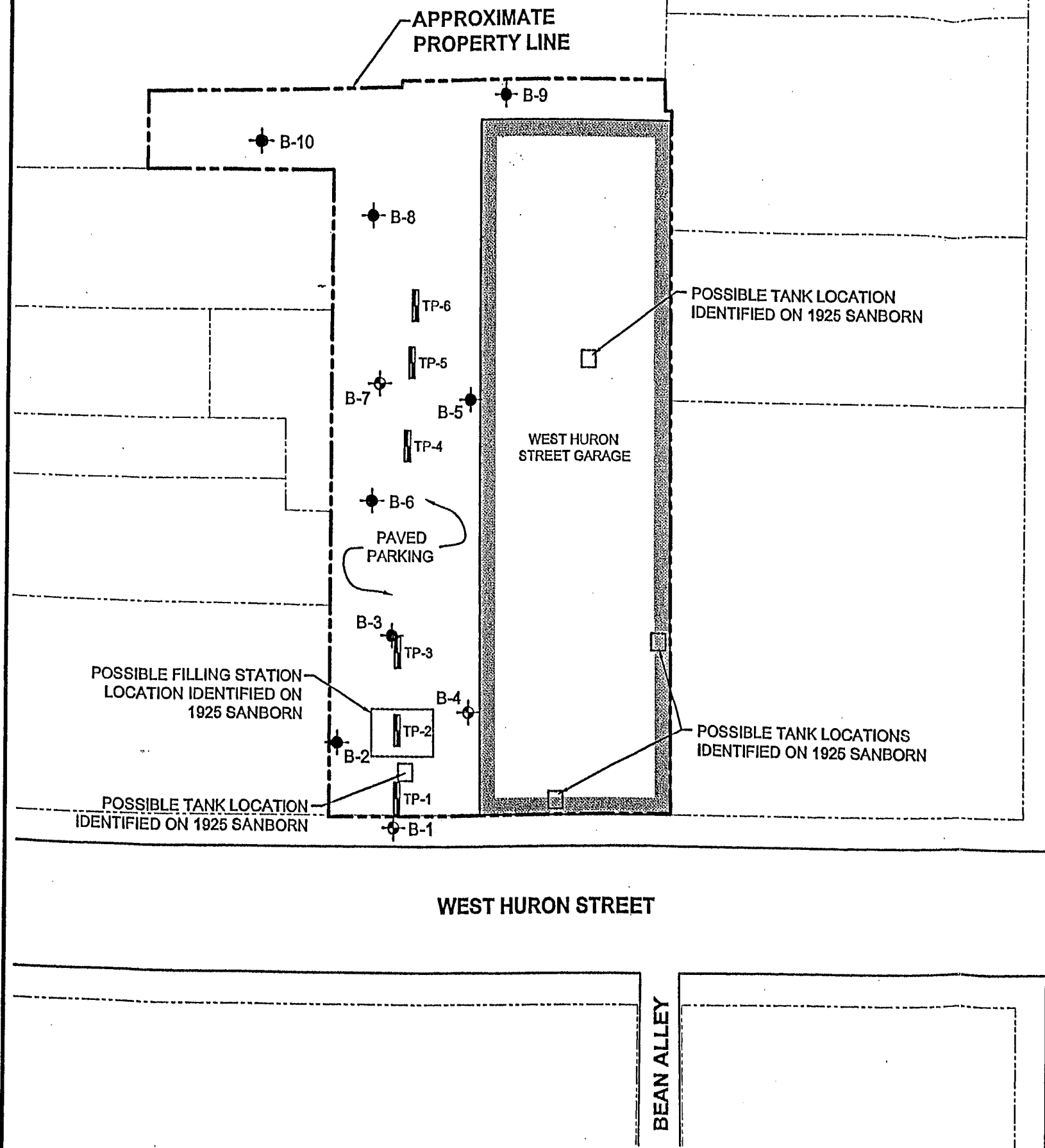
PREPARED FOR
PETER J. BURKE, ESQ.



50 FOUNTAIN PLAZA
SUITE 1350
BUFFALO, NEW YORK 14202
(716) 866-0598

JOB NO.: 0050-001-200

FIGURE 2






FRANKLIN STREET

WEST HURON STREET

BEAN ALLEY

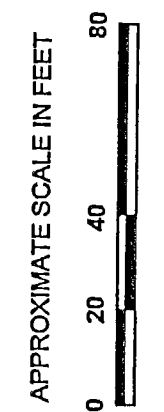
LEGEND:

- 
B-2 APPROXIMATE LOCATION AND DESIGNATION OF SOIL PROBE DONE BY SLC ENVIRONMENTAL SERVICES, INC. 6/21/03
- 
B-1 APPROXIMATE LOCATION AND DESIGNATION OF SOIL PROBE WITH TEMPORARY MICROWELL INSTALLED BY SLC ENVIRONMENTAL SERVICES, INC. 6/21/03
- 
TP-1 APPROXIMATE LOCATION AND DESIGNATION OF TEST PIT DONE PREVIOUSLY BY BENCHMARK

NOTES:

1. BASE MAP ADAPTED FROM A SITE MAP PROVIDED BY THE CLIENT AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

Figure 3
 Adopted from GZA Geoenvironmental,
 Phase II Investigation,
 75 - 77 West Huron Street
 Buffalo, New York



WEST HURON STREET GARAGE
 75-77 WEST HURON STREET
 BUFFALO, NEW YORK
 PHASE II ENVIRONMENTAL SITE ASSESSMENT
 SITE PLAN

PROJECT No.
21.0055760.10

FIGURE No.
3

DATE: AUGUST 2003
DRAFTED BY: BCH
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**MONITORING WELL &
ORC INJECTION POINT LOCATIONS**

INVESTIGATION SUMMARY REPORT & REMEDIAL MEASURES WORK PLAN
75-77 WEST HURON STREET
BUFFALO, NEW YORK

PREPARED FOR
PETER J. BURKE, ESQ.

FIGURE 4

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-5
2003 Phase II ESA (GZA)



**PHASE II INVESTIGATION
75 – 77 WEST HURON STREET
BUFFALO, NEW YORK**

PREPARED FOR:
Knoer & Crawford, LLP.
Buffalo, New York

PREPARED BY:
GZA GeoEnvironmental of New York
Buffalo, New York

July 2003
File No. 21.0055760.10

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July 10, 2003
File No. 21.0055760.10

Mr. Robert Knoer
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Buffalo, NY 14203

364 Nagel Drive
Buffalo
New York 14225
716-685-2300
FAX 716-685-3629
<http://www.gza.net>

Re: Phase II Environmental Site Assessment
75 – 77 West Huron Street
Buffalo, New York

Dear Mr. Knoer:


GZA GeoEnvironmental of New York (GZA) is pleased to submit this report describing the results of our Phase II investigation at the above referenced site. We trust this report satisfies your present needs. Should you have any questions or require additional information following your review, please do not hesitate to contact the undersigned.

Very truly yours,

GZA GEOENVIRONMENTAL OF NEW YORK

An Affiliate of GZA
GeoEnvironmental
Technologies, Inc.


Christopher Boron
Assistant Project Manager


Michele M. Wittman, P.G.
Project Manager

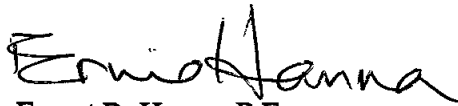

Ernest R. Hanna, P.E.
Associate Principal

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7.00 CONCLUSIONS AND RECOMMENDATIONS	6

FIGURES

FIGURE 1	LOCUS PLAN
FIGURE 2	SITE AND SOIL PROBE LOCATION PLAN

APPENDICES

APPENDIX A	LIMITATIONS
APPENDIX B	SOIL PROBE LOGS
APPENDIX C	ANALYTICAL TEST RESULTS



1.00 INTRODUCTION

In accordance with our June 11th, proposal, GZA GeoEnvironmental of New York (GZA) performed a Phase II Environmental Site Assessment (ESA) at 75 to 77 West Huron Street in Buffalo, New York (Site) for Knoer & Crawford, LLP. A Locus Plan and Site Plan are attached as Figure 1 and Figure 2, respectively.



Knoer & Crawford provided GZA with previous environmental reports completed by others for the Site. The following is a list of the previous reports reviewed.

- “Level I, Environmental Assessment Report, 75 West Huron Street, Buffalo, New York” prepared for Mr. Peter Burke by Enasco Inc. (Enasco), dated June 28, 1993.
- “Phase I Environmental Site Assessment, Parking Garage, 75-77 West Huron, Buffalo, New York 14202” prepared for V.J. Gautieri Development by Maxim Technologies (Maxim), dated May 23, 1999.
- “Phase II Environmental Site Investigation Report, 75-77 West Huron Street Property, Buffalo, New York” prepared for Mr. Peter Burke, completed by Benchmark Environmental Engineering & Science, PLLC (Benchmark), dated August 2001.

Based upon a review of the provided information, GZA identified the following potential environmental concerns.

- Up to 10 possible underground storage tanks (USTs) may have been located on-Site. Historical information indicated that seven USTs have been removed. Potential leakage/spillage from these USTs may have impacted the Site’s soil and/or groundwater.
- Moderate oil staining was observed near the southwest overhead door entrance to the building.
- A Phase II investigation was completed, which included test pits done over the locations of identified USTs. However, the test pits were only completed to depths of 4 to 5.8 feet below ground surface. Additionally, the one soil sample analyzed was a composite from six locations. The depth of the composite sample was not identified and may have been from ground surface to 5 feet. It is GZA’s opinion that a composite sample does not represent the potential contaminants at one location and may “mask” real concentrations. Trace amounts of VOCs were detected in the one composite sample. It is not known if the trace amounts are representative throughout each of the test pits, or if one location was “contaminated” and the results minimized due to the dilution possibility and compositing with “clean” samples.



- One groundwater sample was collected from a sump within the building. The sump location was not identified and may have been in the easterly portion of the building. Based upon an assumed westerly groundwater flow direction, and since the building is located east of the estimated UST locations, the sump would have been in an estimated upgradient direction, and not representative of potential contaminants from the former USTs. A groundwater samples was not collected from the suspect UST area. Groundwater is a good indicator of potential subsurface contamination.

Although the investigation did not identify significant contamination at the parcel, it is GZA's opinion that the investigation did not adequately address the potential concerns associated with the Site. Additionally, a test pit was not completed in the area of moderate surface staining at a southwest garage door entrance.

2.00 PURPOSE AND SCOPE OF WORK

The purpose of this Phase II ESA was to assess whether the historical operations have impacted Site soil and/or groundwater. To accomplish this, the following activities were done.

- Observed the completion of 10 soil probes done by GZA's subcontractor SLC Environmental Services. The probes were completed in the driveway/parking lot area of the Site.
- Collected soil samples at continuous intervals, which varied from approximately 12 to 20 feet below ground surface (bgs).
- Field screened collected soil samples, using an organic vapor meter (OVM) equipped with a photoionization detector (PID).
- Selected three soil samples for chemical analysis, which included volatile organic compounds (VOCs) via EPA Method 8260 STARS¹ and semi-volatile organic compounds (SVOCs) via EPA Method 8270 STARS.
- Selected three groundwater samples for chemical analysis which included VOCs via EPA Method 8260 STARS and SVOCs via EPA Method 8270 STARS.
- Prepared this report, which summarizes the data collected during this Phase II ESA.

This report presents GZA's field observations, results, and opinions. It is subject to the limitations presented in Appendix A and modifications if subsequent information is developed by GZA or any other party.

¹ Spill Technology and Remediation Series Memo #1, prepared by NYSDEC, dated August 1992.

3.00 FIELD STUDIES

This section describes the field studies done as part of GZA's subsurface investigation.

3.10 PROBE INSTALLATIONS



On June 21, 2003 GZA's subcontractor, SLC Environmental Services, Inc. (SLC), completed 10 soil probes as part of our Phase II ESA. The soil probes were completed with a truck mounted Simco Earthprobe 200. The probes are designated as B-1 through B-10. The soil probes B-1 through B-10 were done in the driveway/parking lot area of the Site as shown on Figure 2.

Probes were completed utilizing a truck mounted probe rig equipped with a pneumatic hammer. Each probe was advanced using a 2-inch diameter, 48-inch long macrocore sampler that was driven at continuously 48-inch intervals. A dedicated acetate sampler liner was used between sampling intervals. Representative portions of the recovered soils were placed in 8-ounce glass jars for further classification and headspace analysis.

The open soil probe holes were backfilled with soil cuttings. Probes were completed in the asphalt driveway areas of the Site and were topped with asphalt patch.

GZA prepared soil probe logs summarizing the general subsurface conditions that were observed and encountered at each probe location. These logs are based on visual observations of the recovered soils and include a summary description of the soils using color and composition. Probe logs are presented in Appendix B.

3.20 HEADSPACE SCREENING PROCEDURE

The headspace in the plastic baggies above the collected soil samples was screened for organic vapor compounds using an organic vapor meter (OVM) outfitted with a photoionization detector and a 10.2 eV ultraviolet lamp. The OVM was made by HNu Systems, Inc., Model No. PI-101; and was calibrated in accordance with manufacturer's recommendations. A gas standard of isobutylene was used at an equivalent concentration of 58 parts per million (ppm) as benzene for calibration. A 30-milliliter (ml) syringe was used to puncture the baggie and remove an aliquot of headspace air, which was then injected into the sampling probe of the OVM. Headspace results were recorded on the probe logs included in Appendix B.

3.30 GROUNDWATER COLLECTION

Temporary 1-inch diameter poly vinyl chloride (PVC) piezometers were installed at the completion of drilling at B-1, B-3, B-4 and B-7. However, groundwater samples were collected from only three locations, B-1, B-4, and B-7.

Groundwater samples were collected using a disposable polyethylene bailer. Samples were collected and placed in laboratory supplied analytical jars. Piezometers were removed and the holes backfilled after groundwater samples were collected.

4.00 ANALYTICAL LABORATORY TESTING



Three subsurface soil samples and three groundwater samples were selected and submitted for analytical testing. The selected soil and groundwater samples were packed in an ice filled cooler and sent to the GZA GeoEnvironmental Laboratory in Hopkinton, Massachusetts following typical chain-of-custody procedures. Table 1 is a summary of the samples collected and the analysis completed.

5.00 SUBSURFACE CONDITIONS

5.10 SOILS

Subsurface conditions at the soil probe locations generally consisted of granular fill materials overlying apparent natural deposited sandy soils. The fill soils were generally found to extend from approximately one to four feet below ground surface (bgs). However, fill material was encountered to a depth of approximately seven feet at B-9. The fill soils generally consisted of fine to coarse sand with varying and lesser amounts of gravel, brick, concrete, slag and rubble. Apparent naturally occurring silty sand was found below the fill material at each location and extended the full depth drilled. Probes were done to depths of approximately 16 feet bgs, with the exception of B-12 which extended to 12 feet bgs and B-4 which was completed to 20 feet bgs.

5.20 GROUNDWATER

GZA completed temporary piezometers at B-1, B-4 and B-7. In general, groundwater was encountered at approximately 8 to 9 feet bgs in the southern portion of the Site and from 10 to 12 feet bgs in the northern portion of the Site.

6.00 ANALYTICAL TEST RESULTS

Findings of the laboratory testing of soil and groundwater samples analyzed are presented below. The analytical laboratory report is provided in Appendix C. The analytical results are summarized on Table 2 for the soil samples and on Table 3 for the groundwater samples.

The analytical test results for the surface and subsurface soil samples were compared to:



- NYSDEC² Recommended Soil Cleanup Objectives (RSCOs) presented in NYSDEC, Technical and Administrative Guidance Memorandum (TAGM) HWR-94-4046: Determination of Soil Cleanup Objectives and Cleanup Levels; and
- Eastern USA Background measurements (typical) reported for metals.

The analytical test results for the groundwater samples were compared to:

- NYSDEC Class GA criteria obtained from NYSDEC's Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1), June 1998, amended April 2000.

6.10 SOIL

Volatile Organic Compounds: Three soil samples were analyzed for VOCs STARS compounds list. Analytical results identified VOCs at concentration above their respective TAGM 4046 RSCOs at B-2 from 9.2 to 12 feet and B-6 from 14.5 to 16 feet. These two samples were collected from the saturated soil zone. Total VOCs from the soil analyzed from B-2 and B-6 were 294 parts per million (ppm) and 335 ppm, respectively, which is above the total VOC maximum value of 10 ppm.

No VOCs were detected in the sample analyzed from B-4 from 4 to 8 feet, which was collected from the unsaturated soil.

Semi-volatile Organic Compounds: Three soil samples were analyzed for SVOCs STARS compounds list. Analytical results identified two SVOCs in the samples from B-2 from 9.2 to 12 feet and B-6 from 14.5 to 16 feet. However, the two SVOCs detected were at concentrations below their respective TAGM 4046 RSCO. No SVOCs were detected in the soil sample from B-4 from 4 to 8 feet above method detection limits.

6.20 GROUNDWATER

Volatile Organic Compounds: Three groundwater samples were analyzed for VOCs STARS compounds list. Analytical results identified VOCs in two (B-1 and B-4) of the three samples analyzed. No VOCs were detected above method detection limits at B-7.

Twelve VOCs were detected in B-1 and eleven VOCs were detected at B-4. Each detected VOC exceeded its respective concentration listed under the NYSDEC Class GA groundwater criteria.

Semi-volatile Organic Compounds: Three groundwater samples were analyzed for SVOCs STARS compounds list. Several SVOCs were detected at concentrations above method

² New York State Department of Environmental Conservation.

detection limits in B-1 and B-4; however, naphthalene was the only SVOC in each sample detected above its respective groundwater criteria.

7.00 CONCLUSIONS AND RECOMMENDATIONS



GZA was retained to assess whether possible historical use of the Site has impacted on-Site soil and/or groundwater. Our work included observing soil probes at ten locations, the installation of four temporary micro-wells (three were sampled), headspace screening of soil samples taken from the macrocore sampler and analysis of three subsurface soil samples and three groundwater samples.

A summary of our findings based upon the work conducted as part of this study follows.

- Subsurface conditions at the soil probe locations generally consisted of granular sandy fill soils, overlying apparent naturally occurring silty sand. The sandy soils were generally found to depths of around one to seven feet bgs. The borings were extended to depths ranging from 12 to 20 feet bgs.
- Groundwater was encountered at each boring and ranged in depth from approximately 8 to 12 feet bgs. In general, groundwater was found at shallower depth (approximately 8 to 9 feet) in the southern portion of the Site and deeper depths (approximately 10 to 12 feet) in the northern portion.
- Seven VOCs from B-2 (9.2 to 12 feet) and six VOCs from B-6 (14.5 to 16 feet) were detected at concentrations above their respective TAGM 4046 RSCO. These samples were collected in the saturated soil zone. No VOCs were detected above method detection limits from B-4 (4 to 8 feet), which was collected from the unsaturated soil zone. Additionally, no SVOCs were detected in the three soil samples analyzed, at concentrations above their respective TAGM 4046 RSCO.
- Analytical results identified VOCs in two (B-1 and B-4) of the three groundwater samples analyzed. Twelve VOCs were detected in B-1 and eleven were detected in B-4 at concentrations that exceeded their NYSDEC Class GA groundwater criteria. Naphthalene was the only SVOC detected at these two locations at concentrations above the groundwater criteria. No VOCs or SVOCs were detected above the method detection limits in the groundwater sample from B-7.

Based upon the subsurface soil and groundwater analytical data obtained it is GZA's opinion that petroleum contamination appears to be present within the subsurface soil and groundwater in the southern portion of the Site, located west of the Site building. The contamination was identified in saturated soil samples and groundwater, generally encountered eight feet bgs. Additionally, contamination appears to be limited to the southern portion of the Site and did not appear to extend more than 140 feet north of the southern property limit. GZA's investigations did not identify a potential source area or note free product that may be acting as a source for the contamination identified.

The total VOC concentrations from the groundwater samples collected were higher at B-4 (3.3 ppm) than B-1 (1.4 ppm). Based upon a suspected west to southwesterly groundwater flow direction, a possible source may exist under the building. Additionally, up to three possible tanks were identified on the 1925 Sanborn map, to be located within the building or under the building floor. These tanks may still be present.



Contamination was identified in the soil or groundwater samples from B-1 and B-2, both located in an estimated down gradient direction of the Site. This indicates that contaminated groundwater may be migrating off Site.

GZA recommends that Knoer & Crawford, LLP review the data obtained as part of this investigation to determine if there are requirements for reporting the contamination identified. It is GZA's opinion that the presence of these compounds is reportable to NYSDEC. NYSDEC may require additional work, in-situ treatment of impacted soils in the southern portion of the Site and further investigation to determine a potential source area. Because total VOC concentration in the saturated soil is greater than 10 ppm and greater than 1 ppm in groundwater, NYSDEC will likely require remedial work.

GZA also recommends additional work under the building floor, specifically in the suspect tank locations identified on the 1925 Sanborn Map to determine if a source of the apparent petroleum contamination is located on-Site.

TABLES

Table 1
Analytical Testing Program Summary
Parking Garage
75 - 77 West Huron
Buffalo, New York

Location	Date Collected	Depth/ Interval (ft bgs)	VOCs EPA Method 8260 STARS	SVOCs EPA Method 8270 STARS
Subsurface Soil Samples				
B-2	6/24/2003	9.5 to 12	X	X
B-4	6/24/2003	4 to 8	X	X
B-6	2/24/2003	14.5 to 16	X	X
Groundwater Samples				
B-1	6/24/2003	NA	X	X
B-4	6/24/2003	NA	X	X
B-7	6/24/2003	NA	X	X

Notes:

1. NA = not applicable.
2. bgs = below ground surface
3. ft = feet
4. VOCs = Volatile Organic Compounds
5. SVOC = Semi-volatile Organic Compounds

Table 2
Soil Analytical Testing Results Summary
Parking Garage
75 - 77 West Huron
Buffalo, New York

Parameter	NYSDEC TAGM 4046 RSCO	B-2 9.5 to 12 feet bgs	B-4 4 to 8 feet bgs	B-6 14.5 to 16 feet bgs
Volatile Organic Compounds - EPA Method 8260 STARS (ug/kg)				
Toluene	1,500	36,000		950
Ethylbenzene	5,500	20,000		210
m,p-Xylene	1,200	81,000		12,000
o-Xylene	1,200	31,000		660
Isopropylbenzene	5,000	3,900		10,000
n-Propylbenzene	14,000	12,000		34,000
1,3,5-Trimethylbenzene	3,300	22,000		49,000
1,2,4-Trimethylbenzene	13,000	66,000		190,000
sec-Butylbenzene	25,000	1,700		970
p-Isopropyltoluene	11,000	2,000		4,100
n-Butylbenzene	18,000			34,000
Naphthalene	13,000	19,000		
Total VOCs		294,600		335,890
Semi-Volatile Organic Compounds - EPA Method 8270 STARS (ug/kg)				
Naphthalene	13,000	12,000		5,700
2-Methylnaphthalene	36,400	13,000		15,000

Notes:

1. Compounds detected in one or more samples are presented on this table. Refer to Attachment C for list of all compounds included in analysis.
2. Analytical testing completed by GZA GeoEnvironmental Laboratory.
3. Recommended Soil cleanup objectives (RSCOs) based on the NYSDEC TAGM 4046 Determination of Soil Cleanup Levels dated January 1994.
4. ug/kg = part per billion (ppb) a
5. Blank indicates compound was not detected.
6. NT = not tested
7. SB = Site Background
8. NV = no value
9. MDL = method detection limit

Table 3
Groundwater Analytical Testing Results Summary
Parking Garage
75 - 77 West Huron
Buffalo, New York

Parameter	Class GA Criteria	B-1	B-4	B-7
Volatlie OrganicCompounds - EPA Method 8260 STARS (ug/L)				
Benzene	1	21		
Toluene	5	290	23	
Ethylbenzene	5	400	180	
m&p-Xylene	5	90	860	
o-Xylene	5	120	240	
Isopropylbenzene	5	43	48	
N-propylbenzene	5	75	180	
1,3,5-Trimethylbenzene	5	69	280	
1,2,4-Trimethylbenzene	5	96	1200	
sec-Butylbenzene	5	5	16	
p-Isopropyltoluene	5	8.4	41	
Naphthalene	10	190	200	
Total VOCs		1407	3268	
Semi-Volatile Organic Compounds - EPA Method 8270 STARS (ug/L)				
Naphthalene	10	120	130	
2-Methylnaphthalene	NV	28	300	
Acenaphthene	NV		0.24 J	
Fluorene	NV		1.1 J	
Phenanthrene	NV		1.1 J	

Notes:

- Compounds detected in one or more samples are presented on this table.
Refer to Attachment C for list of all compounds included in analysis.
- Analytical testing completed by GZA GeoEnvironmental Laboratory.
- NYSDEC Class GA criteria obtained from Division of Water Technical and Operational Guidance Series (TOGS 1.1.1), June 1998.
- ug/L = part per billion (ppb)
- NV = no value
- Blank indicates compound was not detected.
- J = estimated concentration



DRAWN BY: DEW

DATE: JULY 2003



KNOER, CRAWFORD, LLP
WEST HURON STREET GARAGE
 75-77 WEST HURON STREET
 BUFFALO, NEW YORK

PHASE II ENVIRONMENTAL SITE ASSESSMENT
LOCUS PLAN

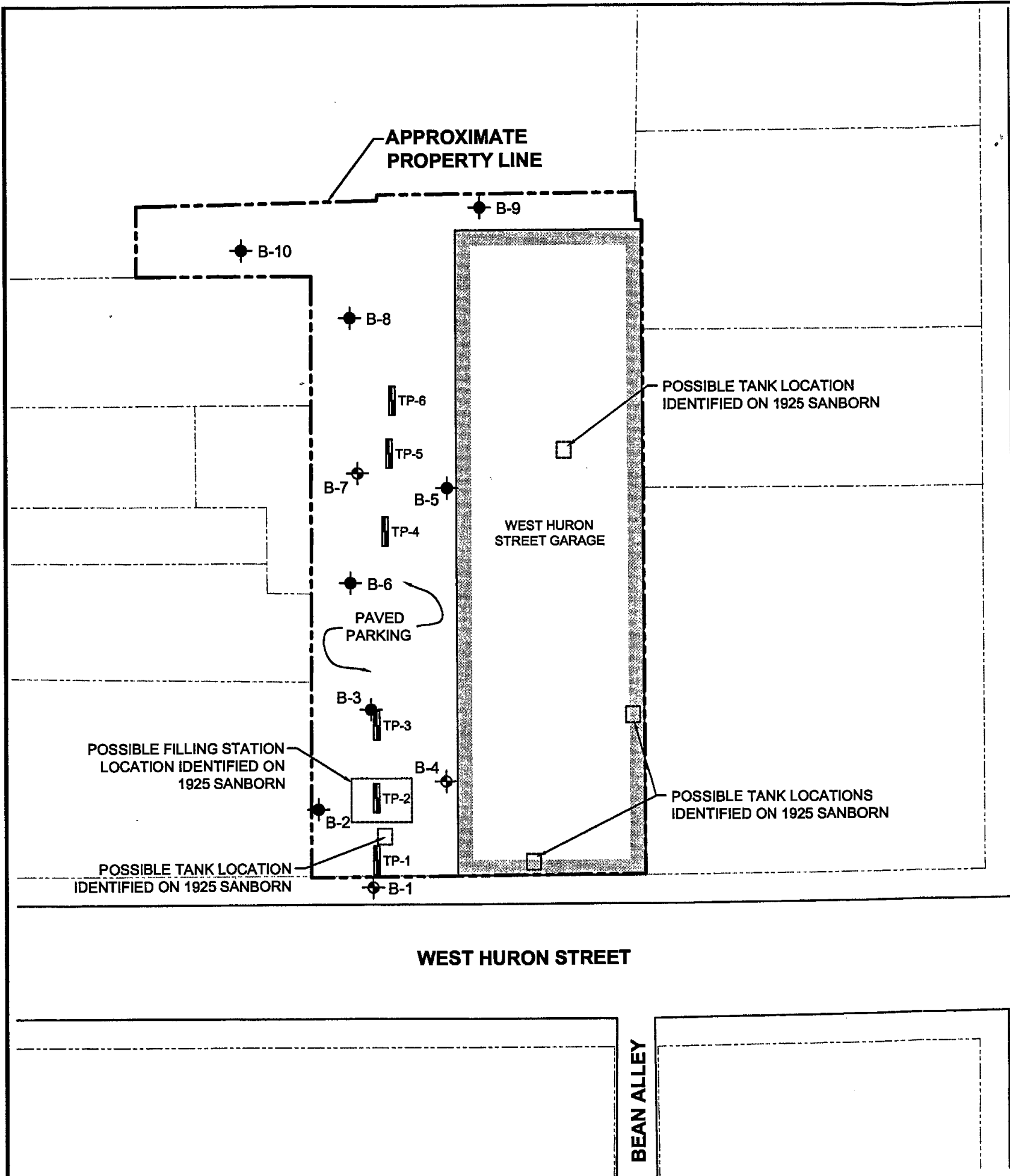
NOTE:

BASE MAP ADAPTED FROM DeLORME 3-D TOPOQUADS ON CD, COPYRIGHT 1999.



PROJECT No.
21.0055760.10

FIGURE No.
1



FRANKLIN STREET

WEST HURON STREET

BEAN ALLEY

WEST HURON STREET GARAGE

LEGEND:

- B-2 APPROXIMATE LOCATION AND DESIGNATION OF SOIL PROBE DONE BY SLC ENVIRONMENTAL SERVICES, INC. 6/21/03
- B-1 APPROXIMATE LOCATION AND DESIGNATION OF SOIL PROBE WITH TEMPORARY MICROWELL INSTALLED BY SLC ENVIRONMENTAL SERVICES, INC. 6/21/03
- TP-1 APPROXIMATE LOCATION AND DESIGNATION OF TEST PIT DONE PREVIOUSLY BY BENCHMARK

NOTES:

1. BASE MAP ADAPTED FROM A SITE MAP PROVIDED BY THE CLIENT AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

<p>DRAWN BY: DEW DATE: JULY 2003</p>	<p>GZA GeoEnvironmental of New York</p>
<p>APPROXIMATE SCALE IN FEET</p>	
<p>KNOER, CRAWFORD, LLP WEST HURON STREET GARAGE 75-77 WEST HURON STREET BUFFALO, NEW YORK</p>	
<p>PHASE II ENVIRONMENTAL SITE ASSESSMENT SITE PLAN</p>	
<p>PROJECT No. 21.0055760.10</p>	
<p>FIGURE No. 2</p>	

APPENDIX A
LIMITATIONS

LIMITATIONS

1. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by Client. The work described in this report was carried out in accordance with the Terms and Conditions Agreement.
2. In preparing this report, GZA GeoEnvironmental of New York (GZA) has relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to GZA at the time of the site assessment. Although there may have been some degree of overlap in the information provided by these various sources, GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment.
3. In the event that bank counsel or title examiner for Client obtains information on environmental or hazardous waste issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.
4. Observations were made of the site and of structures on the site as indicated within the report. Where access to portions of the site or to structures on the site was unavailable or limited, GZA renders no opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, in that portion of the site or structure. In addition, GZA renders no opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, where direct observation of the interior walls, floor, or ceiling of a structure on a site was obstructed by objects or coverings on or over these surfaces.
5. Unless otherwise specified in the report, GZA did not perform testing or analyses to determine the presence or concentration of asbestos or polychlorinated biphenyls (PCB's) at the site or in the environment at the site.
6. The purpose of this report was to assess the physical characteristics of the subject site with respect to the presence in the environment of hazardous material or oil. No specific attempt was made to check on the compliance of present or past owners or operators of the site with federal, state, or local laws and regulations, environmental or otherwise.
7. The conclusions and recommendations contained in this report are based in part upon the data obtained from a limited number of soil and/or groundwater samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and

recommendations of this report.

8. Water level readings have been made in the test pits, borings, and/or observation wells at the times and under the conditions stated on the test pit or boring logs. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.
9. Except as noted within the text of the report, no quantitative laboratory testing was performed as part of the site assessment. Where such analyses have been conducted by an outside laboratory, GZA has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.
10. The conclusions and recommendations contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. As indicated within the report, some of these data are preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA and the conclusions and recommendations presented herein modified accordingly.
11. Chemical analyses have been performed for specific parameters during the course of this site assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the site.
12. It is recommended that GZA be retained to provide further engineering services during construction and/or implementation of any remedial measures recommended in this report. This is to allow GZA to observe compliance with the concepts and recommendations contained herein, and to allow the development of design changes in the event that subsurface conditions differ from those anticipated.

APPENDIX B
SOIL PROBE LOGS

ENGINEERS AND SCIENTISTS

CONTRACTOR		SLC Environmental Services		BORING LOCATION		See Figure 2		
DRILLER		Rick Rose		GROUND SURFACE ELEVATION		NA DATUM NA		
START DATE		6/21/2003		END DATE		06/21/2003		
GZA GEOENVIRONMENTAL REPRESENTATIVE				C. Boron				
WATER LEVEL DATA				TYPE OF DRILL RIG				
DATE		TIME		WATER		CASING		
				Casing Size and Diameter				
				2" diameter by 48" long				
				Overburden Sampling Method				
				Direct push				
				Rock Drilling Method				
				NA				
D E P T H	SAMPLE INFORMATION			SAMPLE DESCRIPTION			NOTES	O V M <small>(ppm)</small>
	Sample Number	DEPTH (FT)	RECOVERY (%)					
1	S-1	0 - 4	70	CONCRETE			Installed 1" diameter temporary PVC micro-well	ND
2				Black SAND, some Gravel, moist (FILL)				
3				Orange brown fine SAND, some Silt, moist				
4	S-2	4 - 8	90	Grades to:...little silt				ND
5								
6								
7								
8								
9	S-3	8 - 12	90	Grades to:...wet				4
10								
11								
12								
13	S-4	12 - 16	100	Grades to:...Brown/Gray with petroleum odors				40
14								
15								
16								
17				End of Boring at 16 feet bgs.				
18								
19								
20								
S - Split Spoon Sample		NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples.						
C - Rock Core Sample		Meter was calibrated to the equivalent of 58 ppm benzene in air.						
General		1) Stratification lines represent approximate boundry between soil types, transitions may be gradual.						
Notes:		2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.						

CONTRACTOR		SLC Environmental Services		BORING LOCATION		See Figure 2		
DRILLER		Rick Rose		GROUND SURFACE ELEVATION		NA DATUM NA		
START DATE		6/21/2003		END DATE		06/21/2003		
GZA GEOENVIRONMENTAL REPRESENTATIVE				C. Boron				
WATER LEVEL DATA				TYPE OF DRILL RIG				
DATE		TIME		WATER		CASING		
				Simco Earthprobe 200				
				CASING SIZE AND DIAMETER				
				2" diameter by 48" long				
				OVERBURDEN SAMPLING METHOD				
				Direct push				
				ROCK DRILLING METHOD				
				NA				
D E P T H	SAMPLE INFORMATION			SAMPLE DESCRIPTION			NOTES	O V M
	Sample Number	DEPTH (FT)	RECOVERY (%)					(ppm)
1	S-1	0 - 4	70	Dark brown/Black fine to coarse SAND, some Gravel, moist (FILL) Orange brown fine SAND, little Silt, moist				ND
2								
3								
4				Grades to:..Tan brown, some Silt				
5	S-2	4 - 8	75	Grades to:..little Silt				ND
6								
7								
8				Grades to:..Orange brown striations				
9	S-3	8 - 12	80	Grades to:..wet				100
10				Grades to:..Brown/Gray with petroleum odors				
11								
12								
13				End of Boring at 12 feet bgs.				
14								
15								
16								
17								
18								
19								
20								
S - Split Spoon Sample		NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples.						
C - Rock Core Sample		Meter was calibrated to the equivalent of 58 ppm benzene in air.						
General Notes:		1) Stratification lines represent approximate boundry between soil types, transitions may be gradual.						
		2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.						

ENGINEERS AND SCIENTISTS

CONTRACTOR <u>SLC Environmental Services</u>		BORING LOCATION <u>See Figure 2</u>				
DRILLER <u>Rick Rose</u>		GROUND SURFACE ELEVATION <u>NA</u> DATUM <u>NA</u>				
START DATE <u>6/21/2003</u> END DATE <u>06/21/2003</u>		GZA GEOENVIRONMENTAL REPRESENTATIVE <u>C. Boron</u>				
WATER LEVEL DATA		TYPE OF DRILL RIG <u>Simco Earthprobe 200</u>				
DATE	TIME	WATER	CASING			
		CASING SIZE AND DIAMETER <u>2" diameter by 48" long</u>				
		OVERBURDEN SAMPLING METHOD <u>Direct push</u>				
		ROCK DRILLING METHOD <u>NA</u>				
D E P T H	SAMPLE INFORMATION			SAMPLE DESCRIPTION	NOTES	O V M <small>(ppm)</small>
	Sample Number	DEPTH (FT)	RECOVERY (%)			
1	S-1	0 - 4	70	ASPHALT and Subbase	Installed 1" diameter temporary PVC micro-well	2
2				Black SAND, little Slag, little Concrete, moist (FILL)		
3				Red BRICK, moist (FILL)		
4				Orange brown/Tan fine to medium SAND, moist		
5	S-2	4 - 8	80	Grades to:... Tan		2
6				Grades to:... little Clayey Silt		
7						
8						
9	S-3	8 - 12	85	Grades to:... Brown, wet		17
10						
11						
12						
13	S-4	12 - 16	60	Grades to:... Brown/Gray with petroleum odors		40
14						
15						
16						
17				End of Boring at 16 feet bgs.		
18						
19						
20						
S - Split Spoon Sample		NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples.				
C - Rock Core Sample		Meter was calibrated to the equivalent of 58 ppm benzene in air.				
General		1) Stratification lines represent approximate boundry between soil types, transitions may be gradual.				
Notes:		2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.				

CONTRACTOR <u>SLC Environmental Services</u>		BORING LOCATION <u>See Figure 2</u>	
DRILLER <u>Rick Rose</u>		GROUND SURFACE ELEVATION <u>NA</u> DATUM <u>NA</u>	
START DATE <u>6/21/2003</u> END DATE <u>06/21/2003</u>		GZA GEOENVIRONMENTAL REPRESENTATIVE <u>C. Boron</u>	

WATER LEVEL DATA				TYPE OF DRILL RIG <u>Simco Earthprobe 200</u>	
DATE	TIME	WATER	CASING	CASING SIZE AND DIAMETER <u>2" diameter by 48" long</u>	
				OVERBURDEN SAMPLING METHOD <u>Direct push</u>	
				ROCK DRILLING METHOD <u>NA</u>	

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	NOTES	O V M <small>(ppm)</small>
	Sample Number	DEPTH (FT)	RECOVERY (%)			
1	S-1	0 - 4	50	Brown SAND, little Gravel, little Concrete, moist (FILL)		ND
2				Orange brown/Tan fine to medium SAND, little Silt, moist		
3						
4						
5	S-2	4 - 8	70			3
6						
7						
8						
9	S-3	8 - 12	90			120
10						
11				Grades to...Black/Gray with sheen and petroluen odors		
12						
13	S-4	12 - 16	90			90
14						
15						
16						
17	S-5	16 - 20	100			70
18						
19				Grades to...Gray		
20				Grades to...Brown		
				End of Boring at 20 feet bgs.		

S - Split Spoon Sample NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples.
C - Rock Core Sample Meter was calibrated to the equivalent of 58 ppm benzene in air.

General 1) Stratification lines represent approximate boundry between soil types, transitions may be gradual.
Notes: 2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

ENGINEERS AND SCIENTISTS

CONTRACTOR <u>SLC Environmental Services</u>		BORING LOCATION <u>See Figure 2</u>				
DRILLER <u>Rick Rose</u>		GROUND SURFACE ELEVATION <u>NA</u> DATUM <u>NA</u>				
START DATE <u>6/21/2003</u> END DATE <u>06/21/2003</u>		GZA GEOENVIRONMENTAL REPRESENTATIVE <u>C. Boron</u>				
WATER LEVEL DATA		TYPE OF DRILL RIG <u>Simco Earthprobe 200</u>				
DATE	TIME	WATER	CASING			
		CASING SIZE AND DIAMETER <u>2" diameter by 48" long</u>				
		OVERBURDEN SAMPLING METHOD <u>Direct push</u>				
		ROCK DRILLING METHOD <u>NA</u>				
D E P T H	SAMPLE INFORMATION			SAMPLE DESCRIPTION	NOTES	O V M <small>(ppm)</small>
	Sample Number	DEPTH (FT)	RECOVERY (%)			
1	S-1	0 - 4	75	CONCRETE		1
2				Black/Gray SAND, little Gravel, moist (FILL)		
3				Tan Brown fine to medium SAND, trace Silt, moist		
4						
5	S-2	4 - 8	100			1
6						
7						
8				Grades to: ...Orange brown, little Clayey Silt		
9	S-3	8 - 12	90	Grades to: ...Brown		1
10				Grades to: ...Orange brown		
11				Grades to: ...wet		
12				Grades to: ...Tan		
13	S-4	12 - 16	100	Grades to: ...Brown		1
14						
15				Grades to: ...Orange brown		
16				Grades to: ...Brown		
17				End of Boring at 16 feet bgs.		
18						
19						
20						
S - Split Spoon Sample		NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples.				
C - Rock Core Sample		Meter was calibrated to the equivalent of 58 ppm benzene in air.				
General		1) Stratification lines represent approximate boundary between soil types, transitions may be gradual.				
Notes:		2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.				

CONTRACTOR		SLC Environmental Services		BORING LOCATION		See Figure 2	
DRILLER		Rick Rose		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		6/21/2003		END DATE		06/21/2003	
GZA GEOENVIRONMENTAL REPRESENTATIVE				C. Boron			

WATER LEVEL DATA				TYPE OF DRILL RIG			
DATE	TIME	WATER	CASING	Simco Earthprobe 200			
				CASING SIZE AND DIAMETER			
				2" diameter by 48" long			
				OVERBURDEN SAMPLING METHOD			
				Direct push			
				ROCK DRILLING METHOD			
				NA			

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	NOTES	O V M <small>(bgs)</small>
	Sample Number	DEPTH (FT)	RECOVERY (%)			
1	S-1	0 - 4	60	ASPHALT		3
2				Dark brown/Black SAND, little Gravel, trace Brick, moist (FILL)		
3				Grades to...Brown		
4				Grades to...Light brown, trace Concrete		
5	S-2	4 - 8	80	Orange brown fine to medium SAND, little Silt, moist		1
6				Grades to...Tan		
7						
8						
9	S-3	8 - 12	90	Grades to...Brown, wet		ND
10						
11				Grades to...Tan		
12						
13	S-4	12 - 16	90			110
14						
15				Grades to...Black/Gray with petroleum odors		
16						
17				End of Boring at 16 feet bgs.		
18						
19						
20						

S - Split Spoon Sample	NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples. Meter was calibrated to the equivalent of 58 ppm benzene in air.
C - Rock Core Sample	
General	1) Stratification lines represent approximate boundry between soil types, transitions may be gradual.
Notes:	2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

ENGINEERS AND SCIENTISTS

CONTRACTOR		SLC Environmental Services		BORING LOCATION		See Figure 2	
DRILLER		Rick Rose		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		6/21/2003		END DATE		06/21/2003	
GZA GEOENVIRONMENTAL REPRESENTATIVE				C. Boron			

WATER LEVEL DATA				TYPE OF DRILL RIG				Simco Earthprobe 200							
DATE		TIME		WATER		CASING		CASING SIZE AND DIAMETER				2" diameter by 48" long			
OVERBURDEN SAMPLING METHOD								Direct push							
ROCK DRILLING METHOD								NA							

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	NOTES	O V M (ppm)
	Sample Number	DEPTH (FT)	RECOVERY (%)			
1	S-1	0 - 4	50	ASPHALT		ND
2				Black SAND, trace Gravel, moist (FILL)		
3				Grades to: ...Brown, little Brick		
4				Grades to: ...Dark brown		
5	S-2	4 - 8	70	Dark brown Clayey SILT, little Sand, moist (FILL)		2
6				Orange brown fine to medium SAND, little Silt, moist		
7				Grades to: ...Tan		
8						
9	S-3	8 - 12	75			ND
10						
11				Grades to: ...Orange brown striations		
12	S-4	12 - 16	80	Grades to: ...Brown, wet		3
13						
14				Grades to: ...Orange brown		
15						
16				End of Boring at 16 feet bgs.		
17						
18						
19						
20						

S - Split Spoon Sample	NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples.
C - Rock Core Sample	Meter was calibrated to the equivalent of 58 ppm benzene in air.
General	1) Stratification lines represent approximate boundary between soil types, transitions may be gradual.
Notes:	2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

CONTRACTOR		SLC Environmental Services		BORING LOCATION		See Figure 2	
DRILLER		Rick Rose		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		6/21/2003		END DATE		06/21/2003	
GZA GEOENVIRONMENTAL REPRESENTATIVE				C. Boron			

WATER LEVEL DATA				TYPE OF DRILL RIG				Simco Earthprobe 200							
DATE		TIME		WATER		CASING		CASING SIZE AND DIAMETER				2" diameter by 48" long			
								OVERBURDEN SAMPLING METHOD				Direct push			
								ROCK DRILLING METHOD				NA			

D E P T H	SAMPLE INFORMATION			SAMPLE DESCRIPTION	NOTES	O V M (ppm)
	Sample Number	DEPTH (FT)	RECOVERY (%)			
1	S-1	0 - 4	70	ASPHALT		1
2				Dark brown fine to medium SAND, little SILT		
3				Grades to...Orange brown		
4				Grades to...Dark brown		
5	S-2	4 - 8	70	Grades to...Orange brown		
6				Grades to...Tan/Orange brown striations		
7						
8				Grades to...Tan, some Silt		ND
9				Grades to...little Silt		
10						
11						
12	S-3	8 - 12	80			4
13						
14				Grades to...wet		
15	S-4	12 - 16	70			ND
16						
17				End of Boring at 16 feet bgs.		
18						
19						
20						

S - Split Spoon Sample	NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples. Meter was calibrated to the equivalent of 58 ppm benzene in air.
C - Rock Core Sample	

General Notes:	1) Stratification lines represent approximate boundry between soil types, transitions may be gradual. 2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
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ENGINEERS AND SCIENTISTS

CONTRACTOR		SLC Environmental Services		BORING LOCATION		See Figure 2	
DRILLER		Rick Rose		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		6/21/2003		END DATE		06/21/2003	
GZA GEOENVIRONMENTAL REPRESENTATIVE				C. Boron			

WATER LEVEL DATA				TYPE OF DRILL RIG				Simco Earthprobe 200			
DATE	TIME	WATER	CASING	CASING SIZE AND DIAMETER				2" diameter by 48" long			
				OVERBURDEN SAMPLING METHOD				Direct push			
				ROCK DRILLING METHOD				NA			

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	NOTES	O V M (ppm)
	Sample Number	DEPTH (FT)	RECOVERY (%)			
1	S-1	0 - 4	10	Brown SAND, some Silt, trace organics, moist (FILL) Grades to:....Gray		ND
2				CONCRETE, moist (FILL)		
3				Yellow hard Rubble, some Wood, moist (FILL)		
4	S-2	4 - 8	50	Brown SAND and Gravel, little Brick, moist (FILL) Grades to:....Black SAND, some Silt, moist		ND
5				CONCRETE, moist (FILL)		
6				Red BRICK, moist (FILL)		
7				Tan fine to medium SAND, some brown striations, moist		
8	S-3	8 - 12	50	Grades to:....Brown		ND
9						
10						
11						
12	S-4	12 - 16	50	Grades to:....wet		ND
13						
14						
15						
16						
17				End of Boring at 16 feet bgs.		
18						
19						
20						

S - Split Spoon Sample	NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples. Meter was calibrated to the equivalent of 58 ppm benzene in air.
C - Rock Core Sample	
General	1) Stratification lines represent approximate boundary between soil types, transitions may be gradual.
Notes:	2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

CONTRACTOR		SLC Environmental Services		BORING LOCATION		See Figure 2	
DRILLER		Rick Rose		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		6/21/2003		END DATE		06/21/2003	
GZA GEOENVIRONMENTAL REPRESENTATIVE				C. Boron			

WATER LEVEL DATA				TYPE OF DRILL RIG				Simco Earthprobe 200							
DATE		TIME		WATER		CASING		CASING SIZE AND DIAMETER				2" diameter by 48" long			
								OVERBURDEN SAMPLING METHOD				Direct push			
								ROCK DRILLING METHOD				NA			

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	NOTES	O V M (ppm)
	Sample Number	DEPTH (FT)	RECOVERY (%)			
1	S-1	0 - 4	50	ASPHALT Black SAND, some Gravel, moist (FILL)		ND
2						
3				CONCRETE, moist (FILL) Brown fine to medium SAND, little Silt, moist		
4						
5	S-2	4 - 8	75	Grades to...Tan		ND
6						
7						
8						
9	S-3	8 - 12	60	Grades to...wet		ND
10						
11						
12						
13	S-4	12 - 16	80	Grades to...Brown		ND
14						
15				Grades to...Orange brown striations		
16						
17				End of Boring at 16 feet bgs.		
18						
19						
20						

S - Split Spoon Sample	NOTES: 1) Hnu PI-101 organic vapor meter used to field screen and headspace soil samples.
C - Rock Core Sample	Meter was calibrated to the equivalent of 58 ppm benzene in air.
General	1) Stratification lines represent approximate boundary between soil types, transitions may be gradual.
Notes:	2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

APPENDIX C
ANALYTICAL TEST RESULTS

GZA GeoEnvironmental, Inc.
 106 South Street
 Hopkinton, MA 01748

ANALYTICAL REPORT

GZA GeoEnvironmental of NY
 364 Nagel Drive
 Buffalo, NY 14225

M. Wittman

Project Name: 75-77 West Huron
 Project No.: 21.0055760.10

Date Received: 6/24/03
 Date Reported: 7/02/03
 Work Order No.: 0306-00148

Sample ID: B - 1
 Sample Date: 6/21/2003

Sample No.: 001

Test Performed	Method	Results	Units	Tech	Analysis Date
POLYNUCLEAR AROMATIC HYDROCARBONS - EPA 8270					
Naphthalene	EPA 8270	120	ug/L	CMG	6/28/03
2-Methylnaphthalene	EPA 8270	28	ug/L	CMG	6/28/03
Acenaphthylene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Acenaphthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Fluorene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Phenanthrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [a] Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Chrysene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [b] Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [k] Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [a] Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Indeno [1,2,3-cd] Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Dibenzo [a,h] Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [g,h,i] Perylene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Surrogates:	EPA 8270				
***Nitrobenzene-D5	EPA 8270	46.2	% R	CMG	6/28/03
***2-Fluorobiphenyl	EPA 8270	62.0	% R	CMG	6/28/03
***P-Terphenyl-D14	EPA 8270	59.5	% R	CMG	6/28/03
Extraction	EPA 8270	1.0	DF	CTG	6/26/03
VOLATILE ORGANICS - STARS					
Methyl-Tert-Butyl-Ether	EPA 8260	<2.0	ug/L	MQS	6/30/03
Benzene	EPA 8260	21	ug/L	MQS	6/30/03
Toluene	EPA 8260	290	ug/L	MQS	6/30/03
Ethylbenzene	EPA 8260	400	ug/L	MQS	6/30/03
m&p-Xylene	EPA 8260	990	ug/L	MQS	6/30/03
o-Xylene	EPA 8260	120	ug/L	MQS	6/30/03
Isopropylbenzene	EPA 8260	43	ug/L	MQS	6/30/03
N-Propylbenzene	EPA 8260	75	ug/L	MQS	6/30/03

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
 Project No.: 21.0055760.10

Work Order No.: 0306-00148

Sample ID: B - 1
 Sample Date: 6/21/2003

Sample No.: 001

Test Performed	Method	Results	Units	Tech	Analysis Date
1,3,5-Trimethylbenzene	EPA 8260	69	ug/L	MQS	6/30/03
tert-Butylbenzene	EPA 8260	<2.0	ug/L	MQS	6/30/03
1,2,4-Trimethylbenzene	EPA 8260	96	ug/L	MQS	6/30/03
sec-Butylbenzene	EPA 8260	5.0	ug/L	MQS	6/30/03
p-Isopropyltoluene	EPA 8260	8.4	ug/L	MQS	6/30/03
n-Butylbenzene	EPA 8260	<2.0	ug/L	MQS	6/30/03
Naphthalene	EPA 8260	190	ug/L	MQS	6/30/03
Surrogates:	EPA 8260				
***1,2-Dichloroethane-D4	EPA 8260	103	% R	MQS	6/30/03
***Toluene-D8	EPA 8260	103	% R	MQS	6/30/03
***4-Bromofluorobenzene	EPA 8260	96.0	% R	MQS	6/30/03
Preparation		2.0	DF	MQS	6/30/03

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
 Project No.: 21.0055760.10

Work Order No.: 0306-00148

Sample ID: B - 4
 Sample Date: 6/21/2003

Sample No.: 002

Test Performed	Method	Results	Units	Tech	Analysis Date
POLYNUCLEAR AROMATIC HYDROCARBONS - EPA 8270				CMG	6/30/03
Naphthalene	EPA 8270	130	ug/L	CMG	6/30/03
2-Methylnaphthalene	EPA 8270	300	ug/L	CMG	6/30/03
Acenaphthylene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Acenaphthene	EPA 8270	0.24 J	ug/L	CMG	6/28/03
Fluorene	EPA 8270	1.1 J	ug/L	CMG	6/28/03
Phenanthrene	EPA 8270	1.1 J	ug/L	CMG	6/28/03
Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [a] Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Chrysene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [b] Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [k] Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [a] Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Indeno [1,2,3-cd] Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Dibenzo [a,h] Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [g,h,i] Perylene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Surrogates:	EPA 8270				
***Nitrobenzene-D5	EPA 8270	50.3	% R	CMG	6/28/03
***2-Fluorobiphenyl	EPA 8270	86.6	% R	CMG	6/28/03
***P-Terphenyl-D14	EPA 8270	83.3	% R	CMG	6/28/03
Extraction	EPA 8270	1.0	DF	CTG	6/26/03
VOLATILE ORGANICS - STARS				EPA 8260	MQS 6/30/03
Methyl-Tert-Butyl-Ether	EPA 8260	<2.0	ug/L	MQS	6/30/03
Benzene	EPA 8260	<2.0	ug/L	MQS	6/30/03
Toluene	EPA 8260	23	ug/L	MQS	6/30/03
Ethylbenzene	EPA 8260	180	ug/L	MQS	6/30/03
m&p-Xylene	EPA 8260	860	ug/L	MQS	7/01/03
o-Xylene	EPA 8260	240	ug/L	MQS	6/30/03
Isopropylbenzene	EPA 8260	48	ug/L	MQS	6/30/03
N-Propylbenzene	EPA 8260	180	ug/L	MQS	6/30/03
1,3,5-Trimethylbenzene	EPA 8260	280	ug/L	MQS	6/30/03
tert-Butylbenzene	EPA 8260	<2.0	ug/L	MQS	6/30/03
1,2,4-Trimethylbenzene	EPA 8260	1200	ug/L	MQS	7/01/03
sec-Butylbenzene	EPA 8260	16	ug/L	MQS	6/30/03
p-Isopropyltoluene	EPA 8260	41	ug/L	MQS	6/30/03
n-Butylbenzene	EPA 8260	<2.0	ug/L	MQS	6/30/03
Naphthalene	EPA 8260	200	ug/L	MQS	7/01/03
Surrogates:	EPA 8260				

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
Project No.: 21.0055760.10

Work Order No.: 0306-00148

Sample ID: B - 4
Sample Date: 6/21/2003

Sample No.: 002

Test Performed	Method	Results	Units	Tech	Analysis Date
***1,2-Dichloroethane-D4	EPA 8260	107	% R	MQS	6/30/03
***Toluene-D8	EPA 8260	112	% R	MQS	6/30/03
***4-Bromofluorobenzene	EPA 8260	93.4	% R	MQS	6/30/03
Preparation		2.0	DF	MQS	6/30/03

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
 Project No.: 21.0055760.10

Work Order No.: 0306-00148

Sample ID: B - 7
 Sample Date: 6/21/2003

Sample No.: 003

Test Performed	Method	Results	Units	Tech	Analysis Date
POLYNUCLEAR AROMATIC HYDROCARBONS - EPA 8270				CMG	6/28/03
Naphthalene	EPA 8270	<2.0	ug/L	CMG	6/28/03
2-Methylnaphthalene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Acenaphthylene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Acenaphthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Fluorene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Phenanthrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [a] Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Chrysene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [b] Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [k] Fluoranthene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [a] Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Indeno [1,2,3-cd] Pyrene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Dibenzo [a,h] Anthracene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Benzo [g,h,i] Perylene	EPA 8270	<2.0	ug/L	CMG	6/28/03
Surrogates:	EPA 8270				
***Nitrobenzene-D5	EPA 8270	57.6	% R	CMG	6/28/03
***2-Fluorobiphenyl	EPA 8270	80.0	% R	CMG	6/28/03
***P-Terphenyl-D14	EPA 8270	80.3	% R	CMG	6/28/03
Extraction	EPA 8270	1.0	DF	CTG	6/26/03
VOLATILE ORGANICS - STARS				MQS	7/01/03
Methyl-Tert-Butyl-Ether	EPA 8260	<1.0	ug/L	MQS	7/01/03
Benzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
Toluene	EPA 8260	<1.0	ug/L	MQS	7/01/03
Ethylbenzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
m&p-Xylene	EPA 8260	<1.0	ug/L	MQS	7/01/03
o-Xylene	EPA 8260	<1.0	ug/L	MQS	7/01/03
Isopropylbenzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
N-Propylbenzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
1,3,5-Trimethylbenzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
tert-Butylbenzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
1,2,4-Trimethylbenzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
sec-Butylbenzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
p-Isopropyltoluene	EPA 8260	<1.0	ug/L	MQS	7/01/03
n-Butylbenzene	EPA 8260	<1.0	ug/L	MQS	7/01/03
Naphthalene	EPA 8260	<1.0	ug/L	MQS	7/01/03
Surrogates:	EPA 8260				

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
Project No.: 21.0055760.10

Work Order No.: 0306-00148

Sample ID: B - 7
Sample Date: 6/21/2003

Sample No.: 003

Test Performed	Method	Results	Units	Tech	Analysis Date
***1,2-Dichloroethane-D4	EPA 8260	113	% R	MQS	7/01/03
***Toluene-D8	EPA 8260	105	% R	MQS	7/01/03
***4-Bromofluorobenzene Preparation	EPA 8260	85.9 1.0	% R DF	MQS	7/01/03 6/30/03

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
Project No.: 21.0055760.10

Work Order No.: 0306-00148

PROJECT NARRATIVE:

1. Sample Receipt

The samples were received on 06/24/03 via GZA courier, EC, X FEDEX, or hand delivered. The temperature of the temperature blank/ X cooler air, was 7.3 degrees C. The samples were received intact for all requested analyses.

The samples were received unpreserved.

2. EPA Method 8270 (STARS PAH List)

The above samples have been evaluated for the presence of the target analytes at levels between the reporting (quantitation) limit and the method detection limit (MDL) and are reported, when detected, as estimated concentrations (J).

Attach QC 8270 06/26/03 - Aqueous

3. EPA Method 8260 (STARS List)

Attach QC 8260 06/30/03 - Aqueous

Attach QC 8260 07/01/03 - Aqueous

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
Project No.: 21.0055760.10

Work Order No.: 0306-00148

Data Authorized By: 

% R = % Recovery
DF = Dilution Factor
DO = Diluted Out

Method 8260: The current version of the method is 8260B.
Method 8021: The current version of the method is 8021B.
Method 8270: The current version of the method is 8270C.
Method 6010: The current version of the method is 6010B.

Laboratory Identification Numbers:

MA: MA092 NH: 2028
CT: PH0579 RI: 236
NC: 615 NY (NELAC): 11063

Please note that the laboratory signed copy of the chain of custody record is an integral part of the data report.

The laboratory report shall not be reproduced except in full without the written consent of the laboratory.

Soil data is reported on a dry weight basis unless otherwise specified.

Matrix Spike / Matrix Spike Duplicate sets are performed as per each method and are reported at the end of the analytical report if assigned on the chain of custody.

Quality Control Report: Method Blank / Laboratory Control Sample

Aqueous

Extraction Date: 6/26/03

MB File Name: K3582

Analysis Date: 6/27/03

LCS File Name: K3583

Spike Value = 20000 ppb

Target Compounds:	Method Blank		Laboratory Control Sample		
	Result	Reporting Limit	% Recovery	Limits	Pass/Fail
naphthalene	ND	2.0	71.9	44 - 92	ok
2-methylnaphthalene	ND	2.0	83.5	46 - 86	ok
acenaphthylene	ND	2.0	77.6	54 - 95	ok
acenaphthene	ND	2.0	71.2	53 - 96	ok
fluorene	ND	2.0	76.9	55 - 99	ok
phenanthrene	ND	2.0	73.3	58 - 104	ok
anthracene	ND	2.0	78.6	59 - 105	ok
fluoranthene	ND	2.0	80.1	61 - 107	ok
pyrene	ND	2.0	71.8	59 - 107	ok
benz [a] anthracene	ND	2.0	78.5	53 - 105	ok
chrysene	ND	2.0	73.5	57 - 106	ok
benzo [b] fluoranthene	ND	2.0	60.5	58 - 105	ok
benzo [k] fluoranthene	ND	2.0	64.6	56 - 106	ok
benzo [a] pyrene	ND	2.0	68.1	60 - 109	ok
indeno [1,2,3-cd] pyrene	ND	2.0	66.8	54 - 116	ok
dibenz [a,h] anthracene	ND	2.0	68.6	52 - 116	ok
benzo [ghi] perylene	ND	2.0	66.2	53 - 115	ok

*ACOE criteria allows up to 5 compounds to be out.

Surrogates:	% Recovery	Limits	% Recovery	Limits	Pass/Fail
Nitrobenzene-D5	51.5	47-120	66.0	47-120	ok
2-Fluorobiphenyl	74.3	46-120	85.5	46-120	ok
P-Terphenyl-D14	62.3	39-120	69.0	39-120	ok

EPA Method 8260 / 524.2 Aqueous Method Blank (MB) and Laboratory Control Sample (LCS) Data

Method Blank

Date Analyzed:	6/30/2003	
Volatile Organics	Conc. ug/L	Acceptance Limit
dichlorodifluoromethane	< 1.0	< 1.0
chloromethane	< 2.0	< 2.0
vinyl chloride	< 1.0	< 1.0
bromomethane	< 1.0	< 1.0
chloroethane	< 1.0	< 1.0
trichlorofluoromethane	< 2.0	< 2.0
diethyl ether	< 2.5	< 2.5
acetone	< 13	< 13
1,1-dichloroethene	< 0.5	< 0.5
FREON-113	< 1.0	< 1.0
carbon disulfide	< 0.5	< 0.5
dichloromethane	< 1.0	< 1.0
tert-butyl alcohol (TBA)	< 0.5	< 0.5
methyl-tert-butyl-ether	< 0.5	< 0.5
trans-1,2-dichloroethane	< 13	< 13
1,1-dichloroethane	< 0.5	< 0.5
di-isopropyl ether (DIPE)	< 0.5	< 0.5
ethyl tert-butyl ether (ETBE)	< 0.5	< 0.5
2-butanone	< 0.5	< 0.5
2,2-dichloropropane	< 5.0	< 5.0
cis-1,2-dichloroethene	< 0.5	< 0.5
chloroform	< 0.5	< 0.5
bromochloromethane	< 0.5	< 0.5
tetrahydrofuran	< 0.5	< 0.5
1,1,1-trichloroethane	< 0.5	< 0.5
1,1-dichloropropene	< 0.5	< 0.5
carbon tetrachloride	< 0.5	< 0.5
1,2-dichloroethane	< 0.5	< 0.5
benzene	< 100	< 100
tert-amyl methyl ether (TAME)	< 0.5	< 0.5
trichloroethene	< 1.0	< 1.0
1,2-dichloropropane	< 0.5	< 0.5
bromodichloromethane	< 0.5	< 0.5
1,4-Dioxane	< 25	< 25
dibromomethane	< 0.5	< 0.5
4-methyl-2-pentanone	< 1.0	< 1.0
cis-1,3-dichloropropene	< 0.5	< 0.5
toluene	< 0.5	< 0.5
trans-1,3-dichloropropene	< 0.5	< 0.5
1,1,2-trichloroethane	< 1.0	< 1.0
2-hexanone	< 0.5	< 0.5
1,3-dichloropropane	< 0.5	< 0.5
tetrachloroethane	< 0.5	< 0.5
dibromochloromethane	< 0.5	< 0.5
1,2-dibromoethane (EDB)	< 0.5	< 0.5
chlorobenzene	< 0.5	< 0.5
1,1,1,2-tetrachloroethane	< 0.5	< 0.5
ethylbenzene	< 1.0	< 1.0
1,1,2,2-tetrachloroethane	< 0.5	< 0.5
m,p-xylene	< 0.5	< 0.5
o-xylene	< 0.5	< 0.5
styrene	< 0.5	< 0.5
bromoform	< 0.5	< 0.5
isopropylbenzene	< 0.5	< 0.5
1,2,3-trichloropropane	< 0.5	< 0.5
bromobenzene	< 0.5	< 0.5
n-propylbenzene	< 0.5	< 0.5
2-chlorotoluene	< 0.5	< 0.5
1,3,5-trimethylbenzene	< 0.5	< 0.5
4-chlorotoluene	< 0.5	< 0.5
tert-butyl-benzene	< 0.5	< 0.5
1,2,4-trimethylbenzene	< 0.5	< 0.5
sec-butyl-benzene	< 0.5	< 0.5
p-isopropyltoluene	< 2.5	< 2.5
1,3-dichlorobenzene	< 0.5	< 0.5
1,4-dichlorobenzene	< 0.5	< 0.5
n-butylbenzene	< 0.5	< 0.5
1,2-dichlorobenzene	< 0.5	< 0.5
1,2-dibromo-3-chloropropane	< 0.5	< 0.5
1,2,4-trichlorobenzene	< 0.5	< 0.5
hexachlorobutadiene	< 0.5	< 0.5
naphthalene	< 0.5	< 0.5
1,2,3-trichlorobenzene	< 0.5	< 0.5

Laboratory Control Sample

Date Analyzed:	6/30/2003		
Spike Concentration = 20ug/L	% Recovery	Acceptance Limits	Verdict
dichlorodifluoromethane	118	70-130	ok
chloromethane	104	70-130	ok
vinyl chloride	113	80-120	ok
bromomethane	97.8	70-130	ok
chloroethane	116	70-130	ok
trichlorofluoromethane	110	70-130	ok
diethyl ether	126	70-130	ok
acetone	115	70-130	ok
1,1-dichloroethene	95.7	80-120	ok
FREON-113	124	70-130	ok
carbon disulfide	117	70-130	ok
dichloromethane	105	70-130	ok
tert-butyl alcohol (TBA)	122	70-130	ok
methyl-tert-butyl-ether	133	70-130	out
trans-1,2-dichloroethane	83.9	70-130	ok
1,1-dichloroethane	111	70-130	ok
di-isopropyl ether (DIPE)	118	70-130	ok
ethyl tert-butyl ether (ETBE)	130	80-120	out
2-butanone	125	70-130	ok
2,2-dichloropropane	107	70-130	ok
cis-1,2-dichloroethene	95.7	70-130	ok
chloroform	114	70-130	ok
bromochloromethane	127	70-130	ok
tetrahydrofuran	124	70-130	ok
1,1,1-trichloroethane	110	70-130	ok
1,1-dichloropropene	111	70-130	ok
carbon tetrachloride	116	80-120	ok
1,2-dichloroethane	123	70-130	ok
benzene	101	70-130	ok
tert-amyl methyl ether (TAME)	134	70-130	out
trichloroethane	117	70-130	ok
1,2-dichloropropane	106	70-130	ok
bromodichloromethane	119	80-120	ok
1,4-Dioxane	100	70-130	ok
dibromomethane	117	70-130	ok
4-methyl-2-pentanone	128	70-130	ok
cis-1,3-dichloropropene	127	70-130	ok
toluene	100	70-130	ok
trans-1,3-dichloropropene	130	70-130	ok
1,1,2-trichloroethane	97.5	70-130	ok
2-hexanone	113	70-130	ok
1,3-dichloropropane	105	70-130	ok
tetrachloroethane	94.2	80-120	ok
dibromochloromethane	129	70-130	ok
1,2-dibromoethane (EDB)	103	70-130	ok
chlorobenzene	97.0	70-130	ok
1,1,1,2-tetrachloroethane	119	70-130	ok
ethylbenzene	83.1	70-130	ok
1,1,2,2-tetrachloroethane	109	70-130	ok
m,p-xylene	91.4	70-130	ok
o-xylene	80.2	70-130	ok
styrene	87.2	70-130	ok
bromoform	110	70-130	ok
isopropylbenzene	86.8	70-130	ok
1,2,3-trichloropropane	102	70-130	ok
bromobenzene	97.8	70-130	ok
n-propylbenzene	83.8	70-130	ok
2-chlorotoluene	86.1	70-130	ok
1,3,5-trimethylbenzene	89.0	70-130	ok
4-chlorotoluene	89.4	70-130	ok
tert-butyl-benzene	97.8	70-130	ok
1,2,4-trimethylbenzene	91.6	70-130	ok
sec-butyl-benzene	86.6	70-130	ok
p-isopropyltoluene	88.9	70-130	ok
1,3-dichlorobenzene	100	70-130	ok
1,4-dichlorobenzene	99.2	70-130	ok
n-butylbenzene	88.7	70-130	ok
1,2-dichlorobenzene	109	70-130	ok
1,2-dibromo-3-chloropropane	122	70-130	ok
1,2,4-trichlorobenzene	96.8	70-130	ok
hexachlorobutadiene	115	70-130	ok
naphthalene	110	70-130	ok
1,2,3-trichlorobenzene	100	70-130	ok

SMF criteria allows 5 compounds to be outside acceptance limits

Surrogates:	Recovery (%)	Acceptance Limits	Surrogates:	Recovery (%)	Acceptance Limits	Verdict
DIBROMOFLUOROMETHANE	126	70-130	DIBROMOFLUOROMETHANE	116	70-130	ok
1,2-DICHLOROETHANE-D4	107	70-130	1,2-DICHLOROETHANE-D4	108	70-130	ok
TOLUENE-D8	106	70-130	TOLUENE-D8	87.2	70-130	ok
4-BROMOFLUOROBENZENE	83.1	70-130	4-BROMOFLUOROBENZENE	91.3	70-130	ok
1,2-DICHLOROBENZENE-D4	82.3	70-130	1,2-DICHLOROBENZENE-D4	99.8	70-130	ok

EPA Method 8260 / 824.2 Aqueous Method Blank (MB) and Laboratory Control Sample (LCS) Data

Method Blank

Date Analyzed:	7/1/2003	Acceptance Limit
Volatile Organics	Conc. ug/L	
dichlorodifluoromethane	< 1.0	< 1.0
chloromethane	< 2.0	< 2.0
vinyl chloride	< 1.0	< 1.0
bromomethane	< 1.0	< 1.0
chloroethane	< 1.0	< 1.0
trichlorofluoromethane	< 2.0	< 2.0
diethyl ether	< 2.5	< 2.5
acetone	< 13	< 13
1,1-dichloroethane	< 0.5	< 0.5
FREON-113	< 1.0	< 1.0
carbon disulfide	< 0.5	< 0.5
dichloromethane	< 1.0	< 1.0
tert-butyl alcohol (TBA)	< 0.5	< 0.5
methyl-tert-butyl-ether	< 0.5	< 0.5
trans-1,2-dichloroethene	< 13	< 13
1,1-dichloroethane	< 0.5	< 0.5
di-isopropyl ether (DIPE)	< 0.5	< 0.5
ethyl tert-butyl ether (ETBE)	< 0.5	< 0.5
2-butanone	< 0.5	< 0.5
2,2-dichloropropane	< 5.0	< 5.0
cis-1,2-dichloroethane	< 0.5	< 0.5
chloroform	< 0.5	< 0.5
bromochloromethane	< 0.5	< 0.5
tetrahydrofuran	< 0.5	< 0.5
1,1,1-trichloroethane	< 0.5	< 0.5
1,1-dichloropropene	< 0.5	< 0.5
carbon tetrachloride	< 0.5	< 0.5
1,2-dichloroethane	< 0.5	< 0.5
benzene	< 100	< 100
tert-amyl methyl ether (TAME)	< 0.5	< 0.5
trichloroethane	< 1.0	< 1.0
1,2-dichloropropane	< 0.5	< 0.5
bromodichloromethane	< 0.5	< 0.5
1,4-Dioxane	< 25	< 25
1,1,1-dibromomethane	< 0.5	< 0.5
4-methyl-2-pentanone	< 1.0	< 1.0
cis-1,3-dichloropropene	< 0.5	< 0.5
toluene	< 0.5	< 0.5
trans-1,3-dichloropropene	< 0.5	< 0.5
1,1,2-trichloroethane	< 1.0	< 1.0
2-hexanone	< 0.5	< 0.5
1,3-dichloropropene	< 0.5	< 0.5
tetrachloroethane	< 0.5	< 0.5
1,1,1,2-tetrachloroethane	< 0.5	< 0.5
1,2-dibromoethane (EDB)	< 0.5	< 0.5
chlorobenzene	< 0.5	< 0.5
1,1,1,2-tetrachloroethane	< 0.5	< 0.5
ethylbenzene	< 1.0	< 1.0
1,1,2,2-tetrachloroethane	< 0.5	< 0.5
m&p-xylene	< 0.5	< 0.5
o-xylene	< 0.5	< 0.5
styrene	< 0.5	< 0.5
bromoform	< 0.5	< 0.5
isopropylbenzene	< 0.5	< 0.5
1,2,3-trichloropropane	< 0.5	< 0.5
bromobenzene	< 0.5	< 0.5
n-propylbenzene	< 0.5	< 0.5
2-chlorotoluene	< 0.5	< 0.5
1,3,5-trimethylbenzene	< 0.5	< 0.5
4-chlorotoluene	< 0.5	< 0.5
tert-butylbenzene	< 0.5	< 0.5
1,2,4-trimethylbenzene	< 0.5	< 0.5
sec-butylbenzene	< 0.5	< 0.5
p-isopropyltoluene	< 2.5	< 2.5
1,3-dichlorobenzene	< 0.5	< 0.5
1,4-dichlorobenzene	< 0.5	< 0.5
n-butylbenzene	< 0.5	< 0.5
1,2-dichlorobenzene	< 0.5	< 0.5
1,2-dibromo-3-chloropropane	< 0.5	< 0.5
1,2,4-trichlorobenzene	< 0.5	< 0.5
hexachlorobutadiene	< 0.5	< 0.5
naphthalene	< 0.5	< 0.5
1,2,3-trichlorobenzene	< 0.5	< 0.5

Laboratory Control Sample

Date Analyzed:	7/1/2003	Acceptance Limits	Verdict
Spiked Concentration = 20ug/L	% Recovery		
dichlorodifluoromethane	107	70-130	ok
chloromethane	91.4	70-130	ok
vinyl chloride	98.7	80-120	ok
bromomethane	88.7	70-130	ok
chloroethane	90.5	70-130	ok
trichlorofluoromethane	95.6	70-130	ok
diethyl ether	114	70-130	ok
acetone	110	70-130	ok
1,1-dichloroethane	90.6	80-120	ok
FREON-113	106	70-130	ok
carbon disulfide	91.8	70-130	ok
dichloromethane	86.3	70-130	ok
tert-butyl alcohol (TBA)	105	70-130	ok
methyl-tert-butyl-ether	124	70-130	ok
trans-1,2-dichloroethene	87.4	70-130	ok
1,1-dichloroethane	101	70-130	ok
di-isopropyl ether (DIPE)	110	70-130	ok
ethyl tert-butyl ether (ETBE)	127	70-130	ok
2-butanone	103	70-130	ok
2,2-dichloropropane	92.2	70-130	ok
cis-1,2-dichloroethane	91.2	70-130	ok
chloroform	104	70-130	ok
bromochloromethane	120	70-130	ok
tetrahydrofuran	98.4	70-130	ok
1,1,1-trichloroethane	92.8	70-130	ok
1,1-dichloropropene	101	70-130	ok
carbon tetrachloride	104	80-120	ok
1,2-dichloroethane	128	70-130	ok
benzene	94.8	70-130	ok
tert-amyl methyl ether (TAME)	134	70-130	out
trichloroethane	108	70-130	ok
1,2-dichloropropane	101	70-130	ok
bromodichloromethane	113	80-120	ok
1,4-Dioxane	100	70-130	ok
1,1,1-dibromomethane	113	70-130	ok
4-methyl-2-pentanone	99.6	70-130	ok
cis-1,3-dichloropropene	114	70-130	ok
toluene	94.5	70-130	ok
trans-1,3-dichloropropene	117	70-130	ok
1,1,2-trichloroethane	97.4	70-130	ok
2-hexanone	103	70-130	ok
1,3-dichloropropene	105	70-130	ok
tetrachloroethane	94.8	70-130	ok
1,1,1,2-tetrachloroethane	128	70-130	ok
1,2-dibromoethane (EDB)	103	70-130	ok
chlorobenzene	97.4	70-130	ok
1,1,1,2-tetrachloroethane	120	70-130	ok
ethylbenzene	89.3	70-130	ok
1,1,2,2-tetrachloroethane	107	70-130	ok
m&p-xylene	91.9	70-130	ok
o-xylene	80.4	70-130	ok
styrene	87.5	70-130	ok
bromoform	111	70-130	ok
isopropylbenzene	86.7	70-130	ok
1,2,3-trichloropropane	108	70-130	ok
bromobenzene	99.2	70-130	ok
n-propylbenzene	86.4	70-130	ok
2-chlorotoluene	92.8	70-130	ok
1,3,5-trimethylbenzene	89.3	70-130	ok
4-chlorotoluene	91.8	70-130	ok
tert-butylbenzene	91.9	70-130	ok
1,2,4-trimethylbenzene	91.7	70-130	ok
sec-butylbenzene	85.6	70-130	ok
p-isopropyltoluene	98.0	70-130	ok
1,3-dichlorobenzene	102	70-130	ok
1,4-dichlorobenzene	100	70-130	ok
n-butylbenzene	88.3	70-130	ok
1,2-dichlorobenzene	107	70-130	ok
1,2-dibromo-3-chloropropane	104	70-130	ok
1,2,4-trichlorobenzene	89.3	70-130	ok
hexachlorobutadiene	112	70-130	ok
naphthalene	111	70-130	ok
1,2,3-trichlorobenzene	100	70-130	ok

SMF criteria allows 6 compounds to be outside acceptance limits

Surrogates:	Recovery (%)	Acceptance Limits
DIBROMOFLUOROMETHANE	129	70-130
1,2-DICHLOROETHANE-D4	107	70-130
TOLUENE-D8	105	70-130
4-BROMOFLUOROBENZENE	85.4	70-130
1,2-DICHLOROBENZENE-D4	92.8	70-130

Surrogates:	Recovery (%)	Acceptance Limits	Verdict
DIBROMOFLUOROMETHANE	110	70-130	ok
1,2-DICHLOROETHANE-D4	102	70-130	ok
TOLUENE-D8	91.5	70-130	ok
4-BROMOFLUOROBENZENE	83.2	70-130	ok
1,2-DICHLOROBENZENE-D4	100	70-130	ok

CHAIN-OF-CUSTODY RECORD

Sample I.D.	Date/Time Sampled (Very Important)	Matrix A=Air S=Soil GW=Ground W. SW=Surface W. WW=Waste W. DW=Drinking W. Other (specify)	WW ONLY										ANALYSIS REQUIRED										Total # of Cont.	Note #				
			D&T Cont.	GC Screen (PCA)	DBA 2 DBA 2	604	DBP1 DBP2	805	Formaldehyde	800 STARS	8021	8021 - 2017 LK	8021 - 2021 LK	8021 - 2022 LK	802-P CB# Only	8081 - Fuel Only	TPH-GC (Max. #100)	TPH-GC W/FMG	EPH (NA DEF)	VPH (NA DEF)	TCLP (Spec. Below)	Filtrate (if requested)			Metals (EPA-15 (2) Rd)	Metals (List Below)		
B-1	6:21-03	GW							X																		WWW	
B-4	↓	GW							X																		WWW	
B-7		GW							X																		WWW	
B-2, 9.5-12		S							X																		WWW	
B-4, 4-B		S							X																		WWW	
B-6, 14.5-20		S							X																		WWW	

PRESERVATIVE (Cl - HCl, M=MeOH, N - HNO3, S - H2SO4, Na - NaOH, O - Other)*

CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)*

RELINQUISHED BY: Chris Barron	DATE/TIME 6:23:03	RECEIVED BY: FED EX PICKUP
RELINQUISHED BY:	DATE/TIME 6/24/03 1000	RECEIVED BY: Chris Barron
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:

NOTES: Preservatives, special reporting limits, known contamination, additional testing parameters, etc.:

PROJECT MANAGER: M. Wittman EXT: _____
DATA REPORT PDF (Adobe) ASCII EXCEL Specify State _____

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS
106 South Street
Hopkinton, MA 01748
(508) 435-9244
FAX (508) 435-9912

TURNAROUND TIME: Standard Rush _____ Days, Approved by: _____ LAB USE: TEMP. OF COOLER 7.3 °C
GZA FILE NO: 0306-21-0055760.1 P.O. NO. _____
PROJECT _____
LOCATION 75-77 West Huron Buffalo
COLLECTOR(S) C. Barron SHEET 1 OF 1



GZA GeoEnvironmental, Inc.
 106 South Street
 Hopkinton, MA 01748

ANALYTICAL REPORT

GZA GeoEnvironmental of NY
 364 Nagel Drive
 Buffalo, NY 14225

M. Wittman

Project Name: 75-77 West Huron
 Project No.: 21.0055760.10

Date Received: 6/24/03
 Date Reported: 7/03/03
 Work Order No.: 0306-00149

Sample ID: B - 2, 9.5 - 12
 Sample Date: 6/21/2003

Sample No.: 001

Test Performed	Method	Results	Units	Tech	Analysis Date
VOLATILE ORGANICS - STARS					
Methyl-Tert-Butyl-Ether	EPA 8260	<1000	ug/kg	MQS	7/01/03
Benzene	EPA 8260	<1000	ug/kg	MQS	7/01/03
Toluene	EPA 8260	36000	ug/kg	MQS	7/01/03
Ethylbenzene	EPA 8260	20000	ug/kg	MQS	7/01/03
m&p-Xylene	EPA 8260	81000	ug/kg	MQS	7/01/03
o-Xylene	EPA 8260	31000	ug/kg	MQS	7/01/03
Isopropylbenzene	EPA 8260	3900	ug/kg	MQS	7/01/03
n-Propylbenzene	EPA 8260	12000	ug/kg	MQS	7/01/03
1,3,5-Trimethylbenzene	EPA 8260	22000	ug/kg	MQS	7/01/03
tert-Butylbenzene	EPA 8260	<2000	ug/kg	MQS	7/01/03
1,2,4-Trimethylbenzene	EPA 8260	66000	ug/kg	MQS	7/01/03
sec-Butylbenzene	EPA 8260	1700	ug/kg	MQS	7/01/03
p-Isopropyltoluene	EPA 8260	2000	ug/kg	MQS	7/01/03
n-Butylbenzene	EPA 8260	<2000	ug/kg	MQS	7/01/03
Naphthalene	EPA 8260	19000	ug/kg	MQS	7/01/03
Surrogates:	EPA 8260				
***1,2-Dichloroethane-D4	EPA 8260	93.6	% R	MQS	7/01/03
***Toluene-D8	EPA 8260	89.5	% R	MQS	7/01/03
***4-Bromofluorobenzene	EPA 8260	98.5	% R	MQS	7/01/03
Preparation		20	DF	MQS	6/30/03
POLYNUCLEAR AROMATIC HYDROCARBONS - EPA 8270					
Naphthalene	EPA 8270	12000	ug/kg	CMG	6/27/03
2-Methylnaphthalene	EPA 8270	13000	ug/kg	CMG	6/27/03
Acenaphthylene	EPA 8270	<660	ug/kg	CMG	6/27/03
Acenaphthene	EPA 8270	<660	ug/kg	CMG	6/27/03
Fluorene	EPA 8270	<660	ug/kg	CMG	6/27/03
Phenanthrene	EPA 8270	<660	ug/kg	CMG	6/27/03
Anthracene	EPA 8270	<660	ug/kg	CMG	6/27/03
Fluoranthene	EPA 8270	<660	ug/kg	CMG	6/27/03
Pyrene	EPA 8270	<660	ug/kg	CMG	6/27/03
Benzo [a] Anthracene	EPA 8270	<660	ug/kg	CMG	6/27/03

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
 Project No.: 21.0055760.10

Work Order No.: 0306-00149

Sample ID: B - 2, 9.5 - 12
 Sample Date: 6/21/2003

Sample No.: 001

Test Performed	Method	Results	Units	Tech	Analysis Date
Chrysene	EPA 8270	< 660	ug/kg	CMG	6/27/03
Benzo [b] Fluoranthene	EPA 8270	< 660	ug/kg	CMG	6/27/03
Benzo [k] Fluoranthene	EPA 8270	< 660	ug/kg	CMG	6/27/03
Benzo [a] Pyrene	EPA 8270	< 660	ug/kg	CMG	6/27/03
Indeno [1,2,3-cd] Pyrene	EPA 8270	< 660	ug/kg	CMG	6/27/03
Dibenzo [a,h] Anthracene	EPA 8270	< 660	ug/kg	CMG	6/27/03
Benzo [g,h,i] Perylene	EPA 8270	< 660	ug/kg	CMG	6/27/03
Surrogates:	EPA 8270				
***Nitrobenzene-D5	EPA 8270	72.2	% R	CMG	6/27/03
***2-Fluorobiphenyl	EPA 8270	116	% R	CMG	6/27/03
***P-Terphenyl-D14	EPA 8270	120	% R	CMG	6/27/03
Extraction		1.0	DF	ARL	6/25/03
PERCENT SOLID		80.5	%	CTG	6/26/03

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
 Project No.: 21.0055760.10

Work Order No.: 0306-00149

Sample ID: B - 6, 14.5 - 16
 Sample Date: 6/21/2003

Sample No.: 002

Test Performed	Method	Results	Units	Tech	Analysis Date
VOLATILE ORGANICS - STARS					
Methyl-Tert-Butyl-Ether	EPA 8260	<250	ug/kg	MQS	6/30/03
Benzene	EPA 8260	<250	ug/kg	MQS	6/30/03
Toluene	EPA 8260	950	ug/kg	MQS	6/30/03
Ethylbenzene	EPA 8260	210	ug/kg	MQS	6/30/03
m&p-Xylene	EPA 8260	12000	ug/kg	MQS	7/01/03
o-Xylene	EPA 8260	660	ug/kg	MQS	6/30/03
Isopropylbenzene	EPA 8260	10000	ug/kg	MQS	7/01/03
n-Propylbenzene	EPA 8260	34000	ug/kg	MQS	7/01/03
1,3,5-Trimethylbenzene	EPA 8260	49000	ug/kg	MQS	7/01/03
tert-Butylbenzene	EPA 8260	<500	ug/kg	MQS	6/30/03
1,2,4-Trimethylbenzene	EPA 8260	190000	ug/kg	MQS	7/01/03
sec-Butylbenzene	EPA 8260	970	ug/kg	MQS	6/30/03
p-Isopropyltoluene	EPA 8260	4100	ug/kg	MQS	7/01/03
n-Butylbenzene	EPA 8260	34000	ug/kg	MQS	7/01/03
Naphthalene	EPA 8260	<100	ug/kg	MQS	7/01/03
Surrogates:	EPA 8260				
***1,2-Dichloroethane-D4	EPA 8260	84.5	% R	MQS	7/01/03
***Toluene-D8	EPA 8260	86.5	% R	MQS	7/01/03
***4-Bromofluorobenzene	EPA 8260	90.8	% R	MQS	7/01/03
Preparation		20	DF	MQS	6/30/03
POLYNUCLEAR AROMATIC HYDROCARBONS - EPA 8270					
Naphthalene	EPA 8270	5700	ug/kg	CMG	6/27/03
2-Methylnaphthalene	EPA 8270	15000	ug/kg	CMG	6/30/03
Acenaphthylene	EPA 8270	<660	ug/kg	CMG	6/27/03
Acenaphthene	EPA 8270	<660	ug/kg	CMG	6/27/03
Fluorene	EPA 8270	<660	ug/kg	CMG	6/27/03
Phenanthrene	EPA 8270	<660	ug/kg	CMG	6/27/03
Anthracene	EPA 8270	<660	ug/kg	CMG	6/27/03
Fluoranthene	EPA 8270	<660	ug/kg	CMG	6/27/03
Pyrene	EPA 8270	<660	ug/kg	CMG	6/27/03
Benzo [a] Anthracene	EPA 8270	<660	ug/kg	CMG	6/27/03
Chrysene	EPA 8270	<660	ug/kg	CMG	6/27/03
Benzo [b] Fluoranthene	EPA 8270	<660	ug/kg	CMG	6/27/03
Benzo [k] Fluoranthene	EPA 8270	<660	ug/kg	CMG	6/27/03
Benzo [a] Pyrene	EPA 8270	<660	ug/kg	CMG	6/27/03
Indeno [1,2,3-cd] Pyrene	EPA 8270	<660	ug/kg	CMG	6/27/03
Dibenzo [a,h] Anthracene	EPA 8270	<660	ug/kg	CMG	6/27/03
Benzo [g,h,i] Perylene	EPA 8270	<660	ug/kg	CMG	6/27/03
Surrogates:	EPA 8270				

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
Project No.: 21.0055760.10

Work Order No.: 0306-00149

Sample ID: B - 6, 14.5 - 16
Sample Date: 6/21/2003

Sample No.: 002

Test Performed	Method	Results	Units	Tech	Analysis Date
***Nitrobenzene-D5	EPA 8270	54.6	% R	CMG	6/27/03
***2-Fluorobiphenyl	EPA 8270	89.1	% R	CMG	6/27/03
***P-Terphenyl-D14	EPA 8270	108	% R	CMG	6/27/03
Extraction		1.0	DF	ARL	6/25/03
PERCENT SOLID		85.5	%	CTG	6/26/03

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
 Project No.: 21.0055760.10

Work Order No.: 0306-00149

Sample ID: B - 4, 4 - 8
 Sample Date: 6/21/2003

Sample No.: 003

Test Performed	Method	Results	Units	Tech	Analysis Date
VOLATILE ORGANICS - STARS					
Methyl-Tert-Butyl-Ether	EPA 8260	<50	ug/kg	MQS	7/01/03
Benzene	EPA 8260	<50	ug/kg	MQS	7/01/03
Toluene	EPA 8260	<50	ug/kg	MQS	7/01/03
Ethylbenzene	EPA 8260	<50	ug/kg	MQS	7/01/03
m&p-Xylene	EPA 8260	<50	ug/kg	MQS	7/01/03
o-Xylene	EPA 8260	<50	ug/kg	MQS	7/01/03
Isopropylbenzene	EPA 8260	<50	ug/kg	MQS	7/01/03
n-Propylbenzene	EPA 8260	<50	ug/kg	MQS	7/01/03
1,3,5-Trimethylbenzene	EPA 8260	<50	ug/kg	MQS	7/01/03
tert-Butylbenzene	EPA 8260	<50	ug/kg	MQS	7/01/03
1,2,4-Trimethylbenzene	EPA 8260	<50	ug/kg	MQS	7/01/03
sec-Butylbenzene	EPA 8260	<50	ug/kg	MQS	7/01/03
p-Isopropyltoluene	EPA 8260	<50	ug/kg	MQS	7/01/03
n-Butylbenzene	EPA 8260	<50	ug/kg	MQS	7/01/03
Naphthalene	EPA 8260	<50	ug/kg	MQS	7/01/03
Surrogates:	EPA 8260				
***1,2-Dichloroethane-D4	EPA 8260	88.0	% R	MQS	7/01/03
***Toluene-D8	EPA 8260	89.9	% R	MQS	7/01/03
***4-Bromofluorobenzene	EPA 8260	92.3	% R	MQS	7/01/03
Preparation		10	DF	MQS	7/01/03
POLYNUCLEAR AROMATIC HYDROCARBONS - EPA 8270					
Naphthalene	EPA 8270	<330	ug/kg	CMG	6/27/03
2-Methylnaphthalene	EPA 8270	<330	ug/kg	CMG	6/27/03
Acenaphthylene	EPA 8270	<330	ug/kg	CMG	6/27/03
Acenaphthene	EPA 8270	<330	ug/kg	CMG	6/27/03
Fluorene	EPA 8270	<330	ug/kg	CMG	6/27/03
Phenanthrene	EPA 8270	<330	ug/kg	CMG	6/27/03
Anthracene	EPA 8270	<330	ug/kg	CMG	6/27/03
Fluoranthene	EPA 8270	<330	ug/kg	CMG	6/27/03
Pyrene	EPA 8270	<330	ug/kg	CMG	6/27/03
Benzo [a] Anthracene	EPA 8270	<330	ug/kg	CMG	6/27/03
Chrysene	EPA 8270	<330	ug/kg	CMG	6/27/03
Benzo [b] Fluoranthene	EPA 8270	<330	ug/kg	CMG	6/27/03
Benzo [k] Fluoranthene	EPA 8270	<330	ug/kg	CMG	6/27/03
Benzo [a] Pyrene	EPA 8270	<330	ug/kg	CMG	6/27/03
Indeno [1,2,3-cd] Pyrene	EPA 8270	<330	ug/kg	CMG	6/27/03
Dibenzo [a,h] Anthracene	EPA 8270	<330	ug/kg	CMG	6/27/03
Benzo [g,h,i] Perylene	EPA 8270	<330	ug/kg	CMG	6/27/03
Surrogates:	EPA 8270				

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
Project No.: 21.0055760.10

Work Order No.: 0306-00149

Sample ID: B - 4, 4 - 8
Sample Date: 6/21/2003

Sample No.: 003

Test Performed	Method	Results	Units	Tech	Analysis Date
***Nitrobenzene-D5	EPA 8270	51.7	% R	CMG	6/27/03
***2-Fluorobiphenyl	EPA 8270	69.4	% R	CMG	6/27/03
***P-Terphenyl-D14	EPA 8270	85.7	% R	CMG	6/27/03
Extraction		1.0	DF	ARL	6/25/03
PERCENT SOLID		86.5	%	CTG	6/26/03

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
Project No.: 21.0055760.10

Work Order No.: 0306-00149

PROJECT NARRATIVE:

1. Sample Receipt

The samples were received on 06/24/03 via GZA courier, EC, X FEDEX, or hand delivered.
The temperature of the temperature blank/ X cooler air, was 7.3 degrees C. The samples were received intact for all requested analyses.

The VOC samples were preserved in methanol upon receipt at the laboratory.

**The above laboratory was re-issued on 07/07/2003 due to a laboratory error.

2. EPA Method 8270 - (STARS PAH List)

Attach QC 8270 06/25/03 - Solid

3. EPA Method 8260

Attach QC 8260 06/30/03 - Solid
Attach QC 8260 07/02/03 - Solid

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: 75-77 West Huron
Project No.: 21.0055760.10

Work Order No.: 0306-00149

Data Authorized By: 

% R = % Recovery
DF = Dilution Factor
DO = Diluted Out

Method 8260: The current version of the method is 8260B.
Method 8021: The current version of the method is 8021B.
Method 8270: The current version of the method is 8270C.
Method 6010: The current version of the method is 6010B.

Laboratory Identification Numbers:

MA: MA092 NH: 2028
CT: PH0579 RI: 236
NC: 615 NY (NELAC): 11063

Please note that the laboratory signed copy of the chain of custody record is an integral part of the data report.

The laboratory report shall not be reproduced except in full without the written consent of the laboratory.

Soil data is reported on a dry weight basis unless otherwise specified.

Matrix Spike / Matrix Spike Duplicate sets are performed as per each method and are reported at the end of the analytical report if assigned on the chain of custody.

Quality Control Report: Method Blank / Laboratory Control Sample

Solid

Extraction Date: 06/25/03

MB File Name: K3558

Analysis Date: 06/26/03

LCS File Name: K3559

Spike Value = 20000 ppb

Target Compounds:	Method Blank		Laboratory Control Sample		
	Result	Reporting Limit	% Recovery	Limits	Pass/Fail
napthalene	ND	330	72.6	53 - 97	ok
2-methylnapthalene	ND	330	84.6	53 - 93	ok
acenaphthylene	ND	330	79.8	58 - 102	ok
acenaphthene	ND	330	73.6	59 - 103	ok
fluorene	ND	330	78.7	59 - 105	ok
phenanthrene	ND	330	75.3	63 - 112	ok
anthracene	ND	330	83.0	65 - 113	ok
fluoranthene	ND	330	85.3	64 - 116	ok
pyrene	ND	330	81.6	63 - 115	ok
benz [a] anthracene	ND	330	91.4	44 - 120	ok
chrysene	ND	330	74.6	59 - 118	ok
benzo [b] fluoranthene	ND	330	73.3	60 - 114	ok
benzo [k] fluoranthene	ND	330	72.7	59 - 115	ok
benzo [a] pyrene	ND	330	75.1	63 - 117	ok
indeno [1,2,3-cd] pyrene	ND	330	74.1	57 - 123	ok
dibenz [a,h] anthracene	ND	330	74.7	55 - 125	ok
benzo [ghi] perylene	ND	330	75.7	56 - 122	ok

ACOE specifications allows up to five (5) compounds to fail criteria.

Surrogates:	% Recovery	Limits	% Recovery	Limits	Pass/Fail
Nitrobenzene-D5	50.4	42-120	66.7	42-120	ok
2-Fluorobiphenyl	70.7	42-120	90.0	42-120	ok
P-Terphenyl-D14	95.9	53-120	105	53-120	ok

EPA Method 8260 Solid Method Blank (MB) and Laboratory Control Sample (LCS) Data

Method Blank

Date Analyzed:	6/30/2003	
Volatile Organics	Conc. ug/L	Acceptance Limit
dichlorodifluoromethane	< 250	< 250
chloromethane	< 500	< 500
vinyl chloride	< 250	< 250
bromomethane	< 250	< 250
chloroethane	< 250	< 250
trichlorofluoromethane	< 500	< 500
diethyl ether	< 130	< 130
acetone	< 1300	< 1300
1,1-dichloroethene	< 130	< 130
freon 113	< 250	< 250
carbon disulfide	< 130	< 130
dichloromethane	< 250	< 250
tert-butyl alcohol (TBA)	< 130	< 130
methyl-tert-butyl-ether	< 130	< 130
trans-1,2-dichloroethane	< 1300	< 1300
1,1-dichloroethane	< 130	< 130
di-isopropyl ether (DIPE)	< 130	< 130
ethyl tert-butyl ether (ETBE)	< 130	< 130
2-butanone	< 130	< 130
2,2-dichloropropane	< 250	< 250
cis-1,2-dichloroethane	< 130	< 130
chloroform	< 130	< 130
bromochloromethane	< 130	< 130
tetrahydrofuran	< 130	< 130
1,1,1-trichloroethane	< 130	< 130
1,1,2-trichloropropene	< 130	< 130
carbon tetrachloride	< 130	< 130
1,2-dichloroethane	< 130	< 130
tert-amyl methyl ether (TAME)	< 130	< 130
trichloroethane	< 250	< 250
1,2-dichloropropane	< 130	< 130
bromodichloromethane	< 130	< 130
1,4 dioxane	< 130	< 130
1,4 dioxane	< 130	< 130
4-methyl-2-pentanone	< 250	< 250
cis-1,3-dichloropropene	< 130	< 130
toluene	< 130	< 130
trans-1,3-dichloropropene	< 130	< 130
1,1,2-trichloroethane	< 250	< 250
2-hexanone	< 130	< 130
1,3-dichloropropane	< 130	< 130
tetrachloroethane	< 130	< 130
1,2-dibromoethane (EDB)	< 130	< 130
chlorobenzene	< 130	< 130
1,1,1,2-tetrachloroethane	< 130	< 130
ethyl benzene	< 250	< 250
1,1,2,2-tetrachloroethane	< 130	< 130
m,p-xylene's	< 130	< 130
o-xylene	< 130	< 130
styrene	< 130	< 130
bromoform	< 130	< 130
isopropylbenzene	< 130	< 130
1,2,3-trichloropropane	< 130	< 130
bromobenzene	< 130	< 130
n-propylbenzene	< 130	< 130
2-chlorotoluene	< 130	< 130
1,3,5-trimethylbenzene	< 130	< 130
4-chlorotoluene	< 130	< 130
tert-butyl-benzene	< 130	< 130
1,2,4-trimethylbenzene	< 130	< 130
sec-butyl-benzene	< 130	< 130
p-isopropyltoluene	< 750	< 750
1,3-dichlorobenzene	< 130	< 130
1,4-dichlorobenzene	< 130	< 130
n-butylbenzene	< 130	< 130
1,2-dichlorobenzene	< 130	< 130
1,2-dibromo-3-chloropropane	< 130	< 130
1,2,4-trichlorobenzene	< 130	< 130
hexachlorobutadiene	< 130	< 130
naphthalene	< 130	< 130
1,2,3-trichlorobenzene	< 130	< 130

Laboratory Control Sample

Date Analyzed:	6/30/2003		Verdict
Spiked Concentration = 20ug/L	% Recovery	Acceptance Limits	
dichlorodifluoromethane	95.1	70-130	ok
chloromethane	98.4	70-130	ok
vinyl chloride	90.2	70-130	ok
bromomethane	88.8	70-130	ok
chloroethane	94.2	70-130	ok
trichlorofluoromethane	89.8	70-130	ok
diethyl ether	94.5	70-130	ok
acetone	92.5	70-130	ok
1,1-dichloroethene	93.4	70-130	ok
freon 113	88.1	70-130	ok
carbon disulfide	94.0	70-130	ok
dichloromethane	91.7	70-130	ok
tert-butyl alcohol (TBA)	88.9	70-130	ok
methyl-tert-butyl-ether	88.7	70-130	ok
trans-1,2-dichloroethane	91.7	70-130	ok
1,1-dichloroethane	94.9	70-130	ok
di-isopropyl ether (DIPE)	93.9	70-130	ok
ethyl tert-butyl ether (ETBE)	82.5	70-130	ok
2-butanone	87.3	70-130	ok
2,2-dichloropropane	112	70-130	ok
cis-1,2-dichloroethane	98.6	70-130	ok
chloroform	80.7	70-130	ok
bromochloromethane	87.8	70-130	ok
tetrahydrofuran	99.8	70-130	ok
1,1,1-trichloroethane	93.0	70-130	ok
1,1-dichloropropene	95.2	70-130	ok
carbon tetrachloride	89.8	70-130	ok
1,2-dichloroethane	90.2	70-130	ok
tert-amyl methyl ether (TAME)	82.1	70-130	ok
trichloroethane	93.2	70-130	ok
1,2-dichloropropane	100	70-130	ok
bromodichloromethane	92.0	70-130	ok
1,4 dioxane	0.00	70-130	out
1,4 dioxane	82.3	70-130	ok
4-methyl-2-pentanone	102	70-130	ok
cis-1,3-dichloropropene	102	70-130	ok
toluene	95.1	70-130	ok
trans-1,3-dichloropropene	93.6	70-130	ok
1,1,2-trichloroethane	95.9	70-130	ok
2-hexanone	98.8	70-130	ok
1,3-dichloropropane	98.8	70-130	ok
tetrachloroethane	83.3	70-130	ok
1,2-dibromoethane (EDB)	90.0	70-130	ok
1,2-dibromoethane (EDB)	97.4	70-130	ok
chlorobenzene	82.0	70-130	ok
1,1,1,2-tetrachloroethane	82.9	70-130	ok
ethyl benzene	92.9	70-130	ok
1,1,2,2-tetrachloroethane	94.7	70-130	ok
m,p-xylene's	87.9	70-130	ok
o-xylene	95.2	70-130	ok
styrene	100	70-130	ok
bromoform	102	70-130	ok
isopropylbenzene	97.9	70-130	ok
1,2,3-trichloropropane	87.2	70-130	ok
bromobenzene	100.0	70-130	ok
n-propylbenzene	88.4	70-130	ok
2-chlorotoluene	90.7	70-130	ok
1,3,5-trimethylbenzene	97.1	70-130	ok
4-chlorotoluene	96.3	70-130	ok
tert-butyl-benzene	96.5	70-130	ok
1,2,4-trimethylbenzene	98.8	70-130	ok
sec-butyl-benzene	98.5	70-130	ok
p-isopropyltoluene	98.7	70-130	ok
1,3-dichlorobenzene	93.6	70-130	ok
1,4-dichlorobenzene	94.8	70-130	ok
n-butylbenzene	100	70-130	ok
1,2-dichlorobenzene	92.3	70-130	ok
1,2-dibromo-3-chloropropane	93.7	70-130	ok
1,2,4-trichlorobenzene	102	70-130	ok
hexachlorobutadiene	107	70-130	ok
naphthalene	104	70-130	ok
1,2,3-trichlorobenzene	99.9	70-130	ok

SMF criteria allows 5 compounds to be outside acceptance limits

Surrogates:	Recovery (%)	Acceptance Limits	Surrogates:	Recovery (%)	Acceptance Limits	Verdict
DIBROMOFLUOROMETHANE	89.5	70-130	DIBROMOFLUOROMETHANE	84.6	70-130	ok
1,2-DICHLOROETHANE-D4	98.4	70-130	1,2-DICHLOROETHANE-D4	82.9	70-130	ok
TOLUENE-D8	86.9	70-130	TOLUENE-D8	88.7	70-130	ok
4-BROMOFLUOROBENZENE	80.0	70-130	4-BROMOFLUOROBENZENE	82.6	70-130	ok
1,2-DICHLOROBENZENE-D4	93.7	70-130	1,2-DICHLOROBENZENE-D4	98.0	70-130	ok

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-6
2010 Site Activity Report (GES)



**Groundwater
& Environmental Services, Inc.®**

158 Sonwil • Cheektowaga, New York 14225 • (716) 706-0074 • Fax (716) 706-0078

December 28, 2010

Ms. Francine Gallego
NYSDEC – Region 9
270 Michigan Avenue
Buffalo, New York 14203

Re: Site Activity Report
Former Sunoco Service Station #0000-1289
181 Delaware Avenue
Buffalo, New York 14202
NYSDEC Spill #0375208

Dear Ms. Gallego:

Groundwater & Environmental Services (GES), on behalf of Sunoco, Inc., is presenting the attached Site Activity Report for activities conducted at the above referenced site.

On December 7, 2010, monitoring wells MW-1R and MW-2 through MW-12 gauged, purged, and sampled. Groundwater samples were collected from each accessible location and analyzed for volatile organic compounds (VOCs) via EPA method 8260.

Groundwater analytical results are as follows:

- BTEX concentrations in groundwater ranged from below detection limits at MW-2 and MW-8 to 14,718.9 parts per billion (ppb) at MW-7.
- MtBE concentrations were not detected above laboratory detection limits at any monitoring wells sampled.

Based on tests conducted on November 30, 2009 and December 7, 2009, with permission from the NYSDEC, the system was shut down due to underperformance with respect to vapor recovery. An updated remedial action plan will be submitted in the 1st quarter 2011 with proposed remedial actions.

If you have any questions or require additional information, please contact GES at (800) 287-7857.

Sincerely,

Eric D. Popken
Project Manager

GROUNDWATER & ENVIRONMENTAL SERVICES, INC.

Attachment

cc: Kinyorda Sliwiak, Sunoco, Inc.
Robert E. Knoer, The Knoer Group, PLLC (rknoer@knoergroup.com)



SITE ACTIVITY REPORT

FORMER SUNOCO SERVICE STATION #0000-1289
181 Delaware Avenue
Buffalo, New York 14202
NYSDEC Spill #0375208

PREPARED FOR:

SUNOCO, INC.
1109 Milton Avenue
Syracuse, New York 13204

Report Date: December 28, 2010

Prepared By: Michelle Naber
Michelle Naber
Project Manager Assistant

Reviewed By: Eric D. Popken
Eric D. Popken
Project Manager

GROUNDWATER & ENVIRONMENTAL SERVICES, INC.
158 Sonwil Drive
Cheektowaga, New York 14225
(800) 287-7857

SITE ACTIVITY REPORT

December 28, 2010

Former Sunoco Service Station #0000-1289

181 Delaware Avenue
Buffalo, New York 14202



Consultant Project Number: 09-01366

Consultant Contact: GES Buffalo 800-287-7857

NYSDEC Spill No.: 0375208

NYSDEC Contact: Francine Gallego

SITE HISTORY:

Past Uses of the Property:

- 1889-1899 The site was utilized as a private residence.
- 1925 The site was utilized as a private residence. The 75 West Huron property was utilized as a petroleum product distribution area.
- 1951 The site was utilized as a filling station. Filling stations were located to the east at 75 West Huron, south across West Huron, and south west across Delaware and West Huron Streets.
- 1959 Based upon aerial photographs, the site appears to have dispenser islands centrally located in the approximate locations of the concrete island footers currently located on-site. The property directly east (75 West Huron) also appears to have a concrete (white) pad located approximately where underground storage tanks (USTs) and dispensers were located on the 1951 Sanborn® map. The building located on the southwestern corner of the intersection is not present at this time. Several buildings have been erected to the south along Delaware Avenue.
- 1966 The aerial photograph is similar to 1959; however the lot directly west of the site is vacant. The white tankfield-like feature on the 75 West Huron property is not as pronounced as the 1959 photo. However, small structures are visible in the area where dispensers were once located.
- 1980 Stuart Gellman purchases the property from Sun Oil, Inc.
- 1983 According to aerial photographs, a structure is located where dispenser islands would be located. A large building was constructed directly to the west of the subject site.

Previous Environmental Work Completed Onsite:

- July 28, 2001: Six test pits were advanced via backhoe to a maximum depth of 5.8 feet below grade (ftbg). Test pits were "advanced until subsurface conditions became consistent". Soil samples were then collected and analyzed for VOCs via EPA Method 8260 and semi-volatile organic compounds (SVOCs) via EPA Method 8270. All targeted parameters were below laboratory detection limits.
- August 2001: Benchmark completed a multiple part investigation of 75-77 West Huron property for Huron Parking Services, Inc. The investigation consisted of sampling of the subsurface drainage sump installation, completion of six test pits, and review of Sanborn® maps. A water sample was collected from the drainage sump and analyzed for volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 8260. All targeted parameters were below laboratory detection limits from the drainage pump sample.

SITE ACTIVITY REPORT

December 28, 2010

Former Sunoco Service Station #0000-1289

181 Delaware Avenue
Buffalo, New York 14202



Consultant Project Number: 09-01366

Consultant Contact: GES Buffalo 800-287-7857

NYSDEC Spill No.: 0375208

NYSDEC Contact: Francine Gallego

- June 21, 2003: GeoEnvironmental, Inc. (GZA) completed a subsurface investigation on the property at 75 West Huron Street consisting of the installation of ten borings ranging in depth from 12 to 20 ftbg. Soil samples from B-2, B-4, and B-8 were collected and submitted for laboratory analysis via EPA 8260 STARS list compounds for VOCs at these locations. Soil samples were also analyzed for SVOCs via EPA Method 8270. Multiple VOCs and SVOCs exceeded values set forth in NYSDEC Technical and Administrative Guidance Memorandum 4046 "Determination of Soil Cleanup Objectives and Cleanup Levels" 1994 (TAGM) guidance document. Based upon the Benchmark and GZA investigations, Benchmark concluded that an ORC-injection program be implemented on-site in conjunction with groundwater monitoring on the property located at 75 West Huron Street to address petroleum impacts on-site.
- November 9, 2003: NYSDEC Spill #0075487 was opened on a report that anti-freeze was noticed to be pooled in the parking lot on November 9, 2000. The NYSDEC inspected the property and closed the spill November 10, 2000 as no anti-freeze was observed.
- September 21, 2003: Nature's Way Environmental Consultants (NVEC), at the request of NYSDEC, conducted a subsurface investigation of the property located at 181 Delaware. The investigation consisted of the installation of ten borings to a maximum depth of 16 ftbg. Soil samples from EP-1, EP-3, EP-5, EP-6, EP-7, B-8, and B-10 were collected and submitted for laboratory analysis via EPA 8260 STARS list compounds for VOCs. Soil samples were also analyzed for SVOCs via EPA Method 8270 at B-10 and EP-3. Multiple VOCs exceeded TAGM guidance. SVOCs were not detected in any soil sample collected. NVEC concluded impacts at 181 Delaware were the source of petroleum impacts on 75 West Delaware. NVEC also concluded additional delineation was needed to quantify the extent petroleum impacts in the area.
- May 24, 2004 through May 26, 2004: GES conducted a subsurface investigation that included the drilling of eight wells, seven monitoring wells (MW-1 through MW-7) and one remedial well (SP-1) via hollow stem technology. All locations were cleared via hand auger and air-knife technology to a depth of four ftbg to prevent damage to potential subsurface utilities. Soil borings MW-1 through MW-7 were converted to 4-inch diameter poly-vinyl chloride (PVC) monitoring wells, while SP-1 was converted to a 2-inch PVC air-injection well. Continuous soil samples were collected during drilling and hand clearing activities. Soil samples were classified using the Burmister Classification System. Field screening of organic vapors in soil samples was conducted using a photoionization detector (PID) via the "sealed container method". Prior to use on-site, the PID was calibrated to a 100-ppm isobutylene standard. Visual and olfactory indications of hydrocarbon impact were recorded. In accordance with TAGM, one soil sample from each soil boring was submitted to Waste Stream Technology for analysis of VOCs via USEPA Method 8021. At locations MW-1, MW-2, MW-5, MW-6, and SP-1 soil samples were collected and

SITE ACTIVITY REPORT

December 28, 2010

Former Sunoco Service Station #0000-1289

**181 Delaware Avenue
Buffalo, New York 14202**



Consultant Project Number: 09-01366

Consultant Contact: GES Buffalo 800-287-7857

NYSDEC Spill No.: 0375208

NYSDEC Contact: Francine Gallego

analyzed for SVOCs via EPA Method 8270 STARS list. Monitoring wells were constructed of 4-inch and 2-inch diameter, Schedule 40 PVC well casing with 0.10 mm well screen. A sand pack (#0 Morie) was placed around the wells to approximately one-foot above the screen followed by a minimum of 6-inches of bentonite. Monitoring wells were developed by removing three well volumes of groundwater or purging the well dry. Groundwater sampling was conducted on June 19, 2004. Soil and groundwater analytical data was included in GES' Environmental Site Assessment Report dated August 31, 2004.

- September 1, 2005 through September 2, 2005: GES supervised the installation of three monitoring wells (MW-8 through MW-10) by SJB Services of Hamburg, New York (SJB). Monitoring well locations are illustrated on Figure 2. Monitoring wells were advanced via hollow stem auger technology. Prior to drilling, each boring was cleared to five ftbg to confirm the absence of subsurface utilities. After hand clearing was completed, borings were advanced to depths ranging from 17 to 25 ftbg. Four soil borings were advanced around MW-8 to delineate impacts in the area (SB-1 through SB-4). Additional locations were attempted along the street in front of 75-77 West Huron Street; however, borings could not be advanced due to the presence of subsurface utilities. Soil samples were continuously collected in approximate 2-foot intervals. Samples were screened with a PID via the sealed container method. Visual and olfactory observations were documented. The soil sample from each boring exhibiting the highest PID reading was collected for laboratory analysis. Soil samples were submitted to Severn Trent Laboratories (STL), a New York State Department of Health (NYSDOH) approved laboratory, for analysis of VOCs via EPA method 8021, NYSDEC STARS Memo #1 list of compounds (STARS list) and semi-volatile organic compounds at select locations.
- November 16 2005: GES completed remedial pilot testing utilizing the GES Data Acquisition Processing Laboratory (DAPL) vehicle. SVE and combined AS-SVE tests were completed on-site. A rising slug test was also completed during testing.
- March 21, 2006: Monitoring well MW-11 was hand cleared with an air knife/hand auger to five ftbg to confirm the absence of subsurface utilities. The well was installed using a hollow stem auger rig provided by SJB. MW-11 was advanced to a total depth of 18 ftbg. After installation activities were completed, MW-11 was developed by surge blocking of the screened interval. Additional development via groundwater purging was also completed. Development activities were performed to dislodge and remove sediment and drill cuttings from the screened interval and sand pack to improve hydraulic connectivity between the wells and the aquifer.
- January 18, 2007: Air samples were collected at three locations within the building located at 73-79 West Huron Avenue. These samples were all collected on the lowest level of the building and were designated S-1, S-2, and S-3. A fourth sample, S-4 was collected at a location (at grade) immediately outside of the building. Results from the air testing indicate, there is no indication of air contamination as a result of petroleum products at the adjacent garage.



SITE ACTIVITY REPORT

December 28, 2010

Former Sunoco Service Station #0000-1289

**181 Delaware Avenue
Buffalo, New York 14202**

Consultant Project Number: 09-01366

Consultant Contact: GES Buffalo 800-287-7857

NYSDEC Spill No.: 0375208

NYSDEC Contact: Francine Gallego

- June 19, 2007: GES submits Remedial Action Plan to NYSDEC proposing the installation of an air-sparge and soil vapor extraction system to address petroleum impacts.
- August 9, 2007: NYSDEC verbally approved the GES' Remedial Action Plan. Installation of the remedial system is pending off-site access.
- October 10, 2007: NYSDEC gives written approval of GES' Remedial Action Plan.
- May 18 – May 21, 2008: GES supervised the installation of nine air sparge wells (SP-2 through SP-10) and two soil vapor extraction wells (V-1 and V-2) on the 181 Delaware and 75-77 West Huron properties.
- June 2 – June 6, 2008: GES installed the subsurface piping for the AS/SVE remedial system on both the 181 Delaware and 75-77 West Huron properties. During the trenching activities, two 1,500-gallon steel Underground Storage Tanks (USTs) were encountered and closed in place. GES also conducted a ground-penetrating radar (GPR) and apparent conductivity survey of the site to locate any additional USTs on-site.
- July 14, 2008: System start-up of the SVE portion of the system.
- August 28, 2008: The AS portion of the system was activated.
- September 23, 2008: Vapors were noted in the on-site building as well as three neighboring buildings. Air-sparging was suspended and vapor mitigation activities were conducted at all affected buildings until ambient air PID readings in the buildings were reduced to non-detect.
- October 26, 2009: GES replaced SVE well MW-1 with MW-1R for the purpose of remedial system optimization. MW-1R was tied into the SVE remedial piping.
- November 30, 2009: GES conducted a series of tests to determine the cause of underperformance with respect to vapor recovery. It was determined that the operation of the system has resulted in significant groundwater mounding. This mounding has effectively "blanked" off the screens of the SVE wells, preventing adequate vapor recovery. As a result, the AS and SVE technologies, in their current condition, cannot be utilized simultaneously without the risk of vapor intrusion in the subject site building and neighboring buildings.
- December 7, 2009: With NYSDEC approval, the SVE system was shut down due to underperformance with respect to vapor recovery.
- March 10, 2010: Monitoring well MW-12 was installed using a hollow-stem auger rig provided by SJB Services, Inc., of Hamburg, New York. During drilling, soil samples were logged and screened using a photoionization detector (PID). One soil sample exhibiting the highest PID measurement was collected and submitted for laboratory analysis of NYSDEC Spill Technology and Remediation Series (STARS)-listed volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 8260. Concentrations of VOCs exceeded NYSDEC Technical and Administrative Guidance Memorandum (TAGM 4046).



SITE ACTIVITY REPORT

December 28, 2010

Former Sunoco Service Station #0000-1289

**181 Delaware Avenue
Buffalo, New York 14202**

Consultant Project Number: 09-01366

Consultant Contact: GES Buffalo 800-287-7857

NYSDEC Spill No.: 0375208

NYSDEC Contact: Francine Gallego

- March 11, 2010: Horizontal soil vapor extraction laterals HSVE-1 and HSVE-2 were installed by Todd Erection Corporation of Lockport, New York. During this work, 9.78 tons of soil was generated.
- March 16-17, 2010: A pilot test was performed, using GES' Data Acquisition and Processing Laboratory (DAPL) unit. The purpose of the pilot test was to test in-situ technologies in an attempt to determine which will best address the petroleum impacted soil and groundwater that is present on-site.

SITE ACTIVITIES COMPLETED DURING PERIOD:

<u>Date</u>	<u>Activities Completed</u>
12/7/10	Gauged, purged, and sampled monitoring wells MW-1R and MW-2 through MW-12. Total BTEX concentrations in groundwater ranged from below detection limits at MW-2 and MW-8 to 14,718.9 ppb at MW-7. MtBE concentrations were not detected above laboratory detection limits at any monitoring wells sampled.

FUTURE ACTIONS:

- An updated remedial action plan will be submitted in the 1st quarter 2011 with proposed remedial actions.

Site Historical Information

RISK ASSESSMENT:

Sensitive Receptors:	Underground utilities and nearby buildings with basements, specifically the Huron parking garage.
Closest Known Well:	None known within a ½ mile radius.
Municipal Water Supply:	Lake Erie, Erie County Water Authority, intake located 2.5 miles away to the northwest.

GENERAL GEOLOGY

The geology and hydrogeology at the site was determined from subsurface investigations completed by GES and others; including collection of soil samples and the installation, gauging, and sampling of groundwater monitoring wells. Native subsurface deposits predominantly consist of brown to black fine to coarse sand. Small amounts (<20%) of gravel

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and silt were also observed on-site. The underlying bedrock most likely consists of the Paleozoic, Middle Devonian aged, Onondaga Limestone (Rickard, L.V., Fisher, S.W., 1970). Bedrock was not encountered during the drilling on-site.

Based on well gauging data from monitoring events, the water table was measured between 7.63 and 10.91 ftbg, at an average of 8.81 ftbg, primarily in the fine to coarse sand. Groundwater flow appears to flow to the southeast at a gradient of 0.05 ft/ft. Hydraulic conductivity has been calculated to be 1.04×10^{-3} ft/sec / 89.9ft/day.

MONITORING:

Well Specifications:

AS Wells: Ten, 2-inch ID, PVC (seven on-site, three off-site).

SVE Wells: Eleven, 4-inch ID, PVC (seven on-site, four off-site); one, 2-inch ID, PVC (off-site).

Monitoring Wells: Two 4-inch ID PVC (one onsite, one off-site).

SVE Laterals: Two, 4-inch ID, PVC (on-site).

Gauging Frequency:

Quarterly at select wells.

Sample Frequency and Method:

Quarterly at select wells, EPA Method 8260.

Analytical Laboratory Used:

Pace Analytical Services, Inc. ELAP #10888.

ATTACHMENTS:

- Table 1 – Historic Groundwater Data Summary
- Table 2 – Hydrocarbon Recovery Table
- Figure 1 – Groundwater Monitoring Map (December 7, 2010)
- Graph 1 – SVE System Flow Rate
- Graph 2 – SVE System Influent Concentration
- Graph 3 – System Mass Removal
- Graph 4 – Operating Time Graph
- Laboratory Analytical Report



FORMER SUNOCO SERVICE STATION #0000-1289
181 Delaware Avenue
Buffalo, New York 14202

TABLE 1
Historic Groundwater Data Summary

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)
MW-1 4-inch PVC Total Depth: 18' Screen Interval: 3-18'	06/19/2004	99.43	8.40	91.03	NP	ND	148	583	2,936	3,667	ND
	10/31/2005	99.43	8.48	90.95	NP	ND	12	64	400	476	ND
	01/30/2006	99.43	8.19	91.24	NP	ND	93	290	2,200	2,583	ND
	04/18/2006	99.43	8.52	90.91	NP	ND	140	660	4,500	5,300	66
	10/02/2006	99.43	8.31	91.12	NP	1.0	180	610	3,900	4,691	ND
	03/13/2007	99.43	8.47	90.96	NP	ND	19	120	940	1,079	ND
	06/25/2007	99.43	8.68	90.75	NP	ND	44	210	1,700	1,954	ND
	11/30/2007	99.43	8.40	91.03	NP	ND	18	150	660	828	ND
	02/19/2008	99.43	8.41	91.02	NP	ND	96	230	1,200	1,526	ND
	05/27/2008	99.43	8.63	90.80	NP	ND	130	220	1,900	2,250	ND
	08/28/2008	99.43	5.50	93.93	NP	ND	44	220	1,100	1,364	ND
	11/24/2008	99.43	8.34	91.09	NP	ND	ND	5.8	96.7	102.5	ND
	02/11/2009	99.43	8.28	91.15	NP	ND	19	102	506	627	ND
	05/13/2009	99.43	8.33	91.10	NP	ND	10.3	69.4	343	422.7	ND
	08/19/2009	99.43	7.82	91.61	NP	ND	15.3	48.1	363	426.4	ND
Well removed on 10/26/09, replaced with MW-1R.											
MW-1R 4-inch PVC Total Depth: 15' Screen Interval: 5-15'	11/17/2009	NA	8.76	NSVD	NP	ND	ND	165	2,020	2,185	ND
	02/23/2010	NA	8.61	NSVD	NP	ND	ND	105	923	1,028	ND
	05/17/2010	NA	8.55	NSVD	NP	ND	ND	48.3	617	665.3	ND
	09/22/2010	NA	8.78	NSVD	NP	ND	ND	83.9	671	754.9	ND
	12/07/2010	NA	8.42	NSVD	NP	ND	ND	9.5	184	193.5	ND
MW-2 4-inch PVC Total Depth: 20' Screen Interval: 5-20'	06/19/2004	99.84	8.67	91.17	NP	32	ND	ND	ND	32	ND
	10/31/2005	99.84	8.74	91.10	NP	ND	ND	ND	ND	ND	ND
	01/30/2006	99.84	8.46	91.38	NP	ND	ND	ND	ND	ND	ND
	04/18/2006	99.84	8.77	91.07	NP	ND	9.1	ND	7.7	16.8	25
	10/02/2006	99.84	8.60	91.24	NP	ND	ND	ND	ND	ND	ND
	03/13/2007	99.84	8.73	91.11	NP	ND	ND	ND	ND	ND	ND
	06/25/2007	99.84	8.91	90.93	NP	ND	ND	ND	ND	ND	ND
	11/30/2007	99.84	8.70	91.14	NP	ND	ND	ND	ND	ND	ND
	02/19/2008	99.84	8.60	91.24	NP	ND	ND	ND	5.7	5.7	ND
	05/27/2008	99.84	8.89	90.95	NP	ND	ND	ND	ND	ND	ND
	08/28/2008	99.84	6.01	93.83	NP	ND	ND	ND	ND	ND	ND
	11/24/2008	99.84	9.18	90.66	NP	ND	ND	ND	ND	ND	ND
	02/11/2009	99.84	8.70	91.14	NP	ND	ND	ND	ND	ND	ND
	05/13/2009	99.84	8.80	91.04	NP	ND	ND	ND	ND	ND	ND
	08/19/2009	99.84	8.37	91.47	NP	ND	ND	ND	ND	ND	ND
	11/17/2009	99.84	8.98	90.86	NP	ND	ND	ND	ND	ND	ND
	02/23/2010	99.84	8.87	90.97	NP	ND	ND	ND	ND	ND	ND
	05/17/2010	99.84	8.75	91.09	NP	ND	ND	ND	ND	ND	ND
	09/22/2010	99.84	8.99	90.85	NP	ND	ND	ND	ND	ND	ND
12/07/2010	99.84	8.64	91.20	NP	ND	ND	ND	ND	ND	ND	



FORMER SUNOCO SERVICE STATION #0000-1289

181 Delaware Avenue
Buffalo, New York 14202

TABLE 1
Historic Groundwater Data Summary

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)
MW-3 4-inch PVC Total Depth: 20' Screen Interval: 5-20'	06/19/2004	98.78	7.81	90.97	NP	ND	ND	ND	7,250	7,250	ND
	10/31/2005	98.78	NS	NS	NS	NS	NS	NS	NS	NS	NS
	01/30/2006	98.78	7.63	91.15	NP	ND	3.9	220	470	693.9	ND
	04/18/2006	98.78	7.91	90.87	NP	ND	9.4	750	3,400	4,159.4	ND
	10/02/2006	98.78	7.75	91.03	NP	ND	4.4	390	1,500	1,894.4	ND
	03/13/2007	98.78	7.98	90.80	NP	ND	17	980	4,500	5,497	ND
	06/25/2007	98.78	8.18	90.60	NP	ND	8.6	780	3,100	3,889	ND
	11/30/2007	98.78	7.86	90.92	NP	ND	18	1,200	3,400	4,618	ND
	02/19/2008	98.78	7.71	91.07	NP	ND	ND	36	61	97	ND
	05/27/2008	98.78	8.11	90.67	NP	ND	ND	13	22	35	ND
	08/28/2008	98.78	7.97	90.81	NP	29	97	930	6,500	7,556	ND
	11/24/2008	98.78	8.28	90.50	NP	5.7	5.0	16.1	240	267	ND
	02/11/2009	98.78	7.73	91.05	NP	ND	12	307	529	848	ND
	05/13/2009	98.78	8.89	89.89	NP	ND	ND	333	424	757	ND
	08/19/2009	98.78	7.87	90.91	NP	ND	10.5	1,520	3,330	4,861	ND
	11/17/2009	98.78	8.19	90.59	NP	ND	9.3	1,070	2,880	3,959	ND
	02/23/2010	98.78	8.01	90.77	NP	ND	13.2	1,370	4,940	6,323.2	ND
05/17/2010	98.78	7.95	90.83	NP	ND	9.0	1,070	3,690	4,769	ND	
09/22/2010	98.78	8.17	90.61	NP	ND	6.6	373	978	1,357.6	ND	
12/07/2010	98.78	7.79	90.99	NP	ND	28.9	1,480	3,780	5,288.9	ND	
MW-4 4-inch PVC Total Depth: 20' Screen Interval: 5-20'	06/19/2004	99.40	8.47	90.93	NP	286	4,630	2,120	8,920	15,956	ND
	10/31/2005	99.40	8.52	90.88	NP	300	1,600	1,100	8,600	11,600	ND
	01/30/2006	99.40	8.31	91.09	8.30	NS	NS	NS	NS	NS	NS
	04/18/2006	99.40	8.57	90.83	NP	390	1,900	1,800	7,900	11,990	ND
	10/02/2006	99.40	8.33	91.08	8.31	NSP	NSP	NSP	NSP	NSP	NSP
	03/13/2007	99.40	8.39	91.18	8.15	NSP	NSP	NSP	NSP	NSP	NSP
	06/25/2007	99.40	9.00	90.40	8.69	NSP	NSP	NSP	NSP	NSP	NSP
	11/30/2007	99.40	8.23	91.17	8.05	NSP	NSP	NSP	NSP	NSP	NSP
	02/19/2008	99.40	8.43	90.97	8.41	NSP	NSP	NSP	NSP	NSP	NSP
	05/27/2008	99.40	8.61	90.79	NP	120	1,300	3,300	16,000	20,720	ND
	08/28/2008	99.40	4.73	94.67	NP	390	2,600	3,100	14,000	20,090	ND
	11/24/2008	99.40	8.90	90.50	NP	29.4	640	2,540	10,900	14,109	ND
	02/11/2009	99.40	8.40	91.00	NP	22.5	275	1,820	5,490	7,608	ND
	05/13/2009	99.40	8.58	90.82	NP	25.6	212	1,920	4,660	6,818	ND
	08/19/2009	99.40	8.57	90.83	NP	23.9	372	2,280	6,870	9,546	ND
	11/17/2009	99.40	8.96	90.44	NP	ND	304	1,060	2,650	4,014	ND
	02/23/2010	99.40	8.83	90.57	NP	ND	277	984	2,860	4,121	ND
05/17/2010	99.40	8.60	90.80	NP	7.9	489	1,180	4,010	5,686.9	ND	
09/22/2010	99.40	8.80	90.60	NP	7.6	294	1,220	3,550	5,071.6	ND	
12/07/2010	99.40	8.53	90.87	NP	34.6	677	1,510	4,030	6,251.6	ND	



FORMER SUNOCO SERVICE STATION #0000-1289

181 Delaware Avenue
Buffalo, New York 14202

TABLE I
Historic Groundwater Data Summary

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)
MW-5 4-inch PVC Total Depth: 20' Screen Interval: 5-20'	06/19/2004	99.56	8.64	90.92	NP	ND	2,940	2,030	7,870	12,840	ND
	10/31/2005	99.56	8.72	90.84	NP	ND	220	390	670	1,280	ND
	01/30/2006	99.56	8.51	91.05	NP	10	2,100	1,300	4,700	8,110	ND
	04/18/2006	99.56	8.72	90.84	NP	ND	1,200	780	2,700	4,680	ND
	10/02/2006	99.56	8.55	91.01	NP	2.7	810	650	2,200	3,662.7	ND
	03/13/2007	99.56	8.71	90.85	NP	ND	1,700	950	4,200	6,850	ND
	06/25/2007	99.56	9.38	90.18	NP	ND	1,200	910	3,200	5,310	ND
	11/30/2007	99.56	8.70	90.86	NP	ND	780	970	2,400	4,150	ND
	02/19/2008	99.56	8.63	90.93	NP	ND	870	390	1,100	2,360	ND
	05/27/2008	99.56	8.85	90.71	NP	ND	1,900	1,400	4,200	7,500	ND
	08/28/2008	99.56	2.62	96.94	NP	ND	63	61	200	324	ND
	11/24/2008	99.56	9.02	90.54	NP	ND	27.6	45.8	104	177.4	ND
	02/11/2009	99.56	8.64	90.92	NP	ND	614	393	918	1,925	ND
	05/13/2009	99.56	8.72	90.84	NP	ND	885	1,350	3,740	5,975	ND
	08/19/2009	99.56	8.69	90.87	NP	ND	1,750	1,560	3,970	7,280	ND
	11/17/2009	99.56	9.01	90.55	NP	ND	2,390	1,360	4,570	8,320	ND
	02/23/2010	99.56	8.90	90.66	NP	ND	2,300	1,550	5,810	9,660	ND
05/17/2010	99.56	8.72	90.84	NP	ND	1,260	1,080	3,840	6,180	ND	
09/22/2010	99.56	8.97	90.59	NP	ND	1,100	322	944	2,366	ND	
12/07/2010	99.56	8.60	90.96	NP	ND	1,440	1,250	4,110	6,800	ND	
MW-6 4-inch PVC Total Depth: 20' Screen Interval: 5-20'	06/19/2004	100.00	9.19	90.81	NP	ND	4,080	1,750	7,740	13,570	ND
	10/31/2005	100.00	9.31	90.69	NP	ND	2,600	1,300	5,800	9,700	ND
	01/30/2006	100.00	9.03	90.97	NP	ND	4,400	1,200	5,500	11,100	ND
	04/18/2006	100.00	9.31	90.69	NP	80	2,400	740	3,500	6,720	18
	10/02/2006	100.00	9.14	90.86	NP	4.0	4,500	1,300	5,500	11,304	ND
	03/13/2007	100.00	9.27	90.73	NP	ND	3,900	980	4,900	9,780	ND
	06/25/2007	100.00	10.47	89.53	NP	ND	3,500	830	3,800	8,130	ND
	11/30/2007	100.00	9.23	90.77	NP	ND	1,200	260	1,700	3,160	ND
	02/19/2008	100.00	9.21	90.79	NP	ND	1,300	190	980	2,470	ND
	05/27/2008	100.00	9.39	90.61	NP	ND	1,200	390	2,200	3,790	ND
	08/28/2008	100.00	7.79	92.21	NP	ND	190	110	360	660	ND
	11/24/2008	100.00	9.55	90.45	NP	ND	6.0	ND	69.5	75.5	ND
	02/11/2009	100.00	9.22	90.78	NP	ND	1,110	652	2,340	4,102	ND
	05/13/2009	100.00	9.27	90.73	NP	ND	2,430	1,460	5,840	9,730	ND
	08/19/2009	100.00	9.24	90.76	NP	ND	1,930	1,030	3,940	6,900	ND
	11/17/2009	100.00	9.45	90.55	NP	ND	2,760	1,120	4,900	8,780	ND
	02/23/2010	100.00	9.42	90.58	NP	ND	3,870	1,720	8,070	13,660	ND
05/17/2010	100.00	9.21	90.79	NP	ND	2,020	749	3,570	6,339	ND	
09/22/2010	100.00	9.48	90.52	NP	ND	1,550	276	1,070	2,896	ND	
12/07/2010	100.00	9.18	90.82	NP	ND	1,760	764	3,380	5,904	ND	



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TABLE 1
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Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)
MW-7 4-inch PVC Total Depth: 20' Screen Interval: 5-20'	06/19/2004	98.77	7.98	90.79	NP	648	3,100	2,320	10,450	16,518	ND
	10/31/2005	98.77	8.11	90.66	NP	710	2,400	1,300	7,800	12,210	ND
	01/30/2006	98.77	7.85	90.92	NP	870	4,200	2,500	13,000	20,570	ND
	04/18/2006	98.77	8.07	90.70	NP	910	4,800	2,400	13,000	21,110	ND
	10/02/2006	98.77	7.91	90.86	NP	560	3,900	2,100	9,500	16,060	ND
	03/13/2007	98.77	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	06/25/2007	98.77	8.29	90.48	NP	ND	ND	ND	ND	ND	ND
	11/30/2007	98.77	8.02	90.75	NP	160	2,500	1,500	8,700	12,860	ND
	02/19/2008	98.77	8.04	90.73	NP	200	3,300	1,700	8,300	13,500	ND
	05/27/2008	98.77	8.18	90.59	NP	22	190	360	1,900	2,472	ND
	08/28/2008	98.77	7.49	91.28	NP	ND	310	180	610	1,100	ND
	11/24/2008	98.77	8.79	89.98	NP	48.9	2,130	365	8,350	10,894	ND
	02/11/2009	98.77	8.45	90.32	NP	36.1	1,070	823	3,650	5,579	ND
	05/13/2009	98.77	8.50	90.27	NP	71.8	1,450	2,350	10,000	13,872	ND
	08/19/2009	98.77	8.47	90.30	NP	57.3	1,950	2,590	13,600	18,197	ND
	11/17/2009	98.77	8.76	90.01	NP	38.1	2,150	1,920	9,010	13,118	ND
	02/23/2010	98.77	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI
05/17/2010	98.77	8.48	90.29	NP	23.4	2,240	1,960	9,570	13,793.4	ND	
09/22/2010	98.77	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI	
12/07/2010	98.77	8.41	90.36	NP	18.9	2,820	1,890	9,990	14,718.9	ND	
MW-8 2-inch PVC Total Depth: 25' Screen Interval: 5-25'	06/19/2004	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	10/31/2005	101.51	10.79	90.72	NP	ND	33	29	300	362	ND
	01/30/2006	101.51	10.61	90.90	NP	ND	1.3	3.2	130	134.5	ND
	04/18/2006	101.51	10.81	90.70	NP	ND	ND	12	67	79	11
	10/02/2006	101.51	10.70	90.81	NP	ND	ND	4.6	52	56.6	ND
	03/13/2007	101.51	10.78	90.73	NP	ND	ND	ND	5.2	5.2	ND
	06/25/2007	101.51	10.91	90.60	NP	ND	ND	ND	ND	ND	ND
	11/30/2007	101.51	10.12	91.39	NP	ND	ND	ND	ND	ND	ND
	02/19/2008	101.51	10.72	90.79	NP	ND	ND	ND	ND	ND	ND
	05/27/2008	101.51	9.87	91.64	NP	ND	ND	ND	ND	ND	ND
	08/28/2008	101.51	10.56	90.95	NP	ND	ND	ND	ND	ND	ND
	11/24/2008	101.51	11.24	90.27	NP	ND	ND	ND	ND	ND	ND
	02/11/2009	101.51	10.49	91.02	NP	ND	ND	ND	ND	ND	ND
	05/13/2009	101.51	11.02	90.49	NP	ND	ND	ND	ND	ND	ND
	08/19/2009	101.51	10.98	90.53	NP	ND	ND	ND	ND	ND	ND
	11/17/2009	101.51	11.2	90.31	NP	ND	ND	ND	ND	ND	ND
	02/23/2010	101.51	11.13	90.38	NP	ND	ND	ND	5.7	5.7	ND
05/17/2010	101.51	11.05	90.46	NP	ND	ND	ND	ND	ND	ND	
09/22/2010	101.51	11.18	90.33	NP	ND	ND	ND	ND	ND	ND	
12/07/2010	101.51	10.30	91.21	NP	ND	ND	ND	ND	ND	ND	



FORMER SUNOCO SERVICE STATION #0000-1289

181 Delaware Avenue
Buffalo, New York 14202

TABLE I
Historic Groundwater Data Summary

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)
MW-9 4-inch PVC Total Depth: 20' Screen Interval: 5-20'	06/19/2004	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	10/31/2005	100.84	10.16	90.68	NP	0.74	2.3	5.4	19	27.4	ND
	01/30/2006	100.84	10.00	90.84	NP	ND	ND	140	390	530	ND
	04/18/2006	100.84	10.19	90.65	NP	30	ND	170	990	1,190	ND
	10/02/2006	100.84	10.05	90.79	NP	ND	ND	100	170	270	ND
	03/13/2007	100.84	10.16	90.68	NP	ND	ND	54	150	204	ND
	06/25/2007	100.84	10.33	90.51	NP	ND	ND	9.9	20	29.9	ND
	11/30/2007	100.84	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	02/19/2008	100.84	10.11	90.73	NP	ND	ND	130	190	320	ND
	05/27/2008	100.84	10.25	90.59	NP	ND	ND	89	330	419	ND
	08/28/2008	100.84	7.92	92.92	NP	ND	ND	330	470	800	ND
	11/24/2008	100.84	10.56	90.28	NP	ND	ND	ND	ND	ND	ND
	02/11/2009	100.84	9.99	90.85	NP	ND	ND	79.5	17.1	96.6	ND
	05/13/2009	100.84	10.02	90.82	NP	ND	ND	19.4	77.4	96.8	ND
	08/19/2009	100.84	10.00	90.84	NP	ND	ND	13.6	104	117.6	ND
	11/17/2009	100.84	10.19	90.65	NP	ND	ND	22.9	64.1	87.0	ND
	02/23/2010	100.84	10.15	90.69	NP	ND	ND	24.5	110	134.5	ND
05/17/2010	100.84	10.03	90.81	NP	ND	ND	65.3	298	363.3	ND	
09/22/2010	100.84	10.21	90.63	NP	ND	ND	12.3	55.9	68.2	ND	
12/07/2010	100.84	9.93	90.91	NP	ND	ND	ND	33.1	33.1	ND	
MW-10 4-inch PVC Total Depth: 18' Screen Interval: 4-18'	06/19/2004	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	10/31/2005	98.87	8.31	90.56	NP	27	60	46	160	293	ND
	01/30/2006	98.87	8.03	90.84	NP	190	60	120	370	740	ND
	04/18/2006	98.87	8.30	90.57	NP	45	28	130	470	673	ND
	10/02/2006	98.87	8.11	90.76	NP	93	26	34	180	333	ND
	03/13/2007	98.87	8.26	90.61	NP	65	7.3	23	28	123.3	ND
	06/25/2007	98.87	7.58	91.29	NP	220	110	130	160	620	ND
	11/30/2007	98.87	8.25	90.62	NP	170	87	200	2,100	2,557	ND
	02/19/2008	98.87	8.18	90.69	NP	280	45	100	590	1,015	ND
	05/27/2008	98.87	8.40	90.47	NP	160	20	31	300	511	ND
	08/28/2008	98.87	7.82	91.05	NP	490	190	350	700	1,730	ND
	11/24/2008	98.87	8.45	90.42	NP	28.4	27.1	31.5	199	286	ND
	02/11/2009	98.87	8.15	90.72	NP	74.7	188	800	700	1,762.7	ND
	05/13/2009	98.87	8.17	90.70	NP	186	163	1,100	1,060	2,509	ND
	08/19/2009	98.87	8.14	90.73	NP	285	181	395	941	1,802	ND
	11/17/2009	98.87	8.45	90.42	NP	131	59.1	242	378	810	ND
	02/23/2010	98.87	8.31	90.56	NP	82.9	127	298	758	1,265.9	ND
05/17/2010	98.87	8.21	90.66	NP	92.2	197	480	1,090	1,859.2	ND	
09/22/2010	98.87	8.41	90.46	NP	17.6	44.3	185	408	654.9	ND	
12/07/2010	98.87	8.09	90.78	NP	11.4	141	423	1,280	1,855.4	ND	



FORMER SUNOCO SERVICE STATION #0000-1289
181 Delaware Avenue
Buffalo, New York 14202

TABLE 1
Historic Groundwater Data Summary

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)
MW-11 4-inch PVC Total Depth: 19.3 Screen Interval: 4.3-19.3	04/18/2006	NA	8.51	NA	NP	540	2,500	2,100	9,800	14,940	ND
	10/02/2006	99.45	8.38	91.07	NP	340	3,600	2,700	10,000	16,640	ND
	03/13/2007	99.45	8.52	90.93	NP	200	1,600	1,800	7,500	11,100	ND
	06/25/2007	99.45	8.73	90.72	NP	190	1,100	2,400	9,600	13,290	ND
	11/30/2007	99.45	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	02/19/2008	99.45	8.56	90.89	NP	490	290	1,600	5,200	7,580	ND
	05/27/2008	99.45	8.70	90.75	NP	640	1500	2,400	5,900	10,440	ND
	08/28/2008	99.45	4.00	95.45	NP	370	1,400	2,900	11,000	15,670	ND
	11/24/2008	99.45	8.58	90.87	NP	115	1,020	2,020	11,600	14,755	ND
	02/11/2009	99.45	8.15	91.30	NP	138	324	1,870	6,480	8,812	ND
	05/13/2009	99.45	8.24	91.21	NP	134	310	903	2,980	4,327	ND
	08/19/2009	99.45	8.19	91.26	NP	222	1,090	1,820	7,270	10,402	ND
	11/17/2009	99.45	8.46	90.99	NP	111	295	521	1,900	2,827	ND
	02/23/2010	99.45	8.32	91.13	NP	66.9	239	369	2,210	2,884.9	ND
05/17/2010	99.45	8.24	91.21	NP	104	514	834	2,780	4,232	ND	
09/22/2010	99.45	8.60	90.85	NP	52.8	157	256	891	1,356.8	ND	
12/07/2010	99.45	8.11	91.34	NP	133	499	619	2,350	3,601	ND	
MW-12 4-inch PVC Total Depth: 20' Screen Interval: 20-5'	05/17/2010	NA	8.90	NSVD	NP	ND	2,110	1,370	5,500	8,980	ND
	09/22/2010	NA	9.10	NSVD	NP	ND	1,460	1,070	4,030	6,560	ND
	12/07/2010	NA	8.81	NSVD	NP	ND	2,080	1,340	5,740	9,160	ND
SP-1 2-inch PVC Total Depth: 23' Screen Interval: 18-23'	06/19/2004	99.44	8.45	90.99	NP	ND	255	458	1,272	1,985	ND
	10/31/2005	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/30/2006	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/18/2006	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/02/2006	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/13/2007	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/25/2007	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/2007	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/19/2008	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/27/2008	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/28/2008	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/24/2008	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/11/2009	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/13/2009	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/19/2009	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
11/17/2009	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	
02/23/2010	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	
05/17/2010	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	
09/22/2010	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	
12/07/2010	99.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Notes:

All units expressed as ug/L (ppb).

NA = Information not available.

NI = Well not installed.

ND = Compound not detected.

NP = Product not detected.

NS = Not sampled.

NSI = Not sampled, well inaccessible.

NSP = Not sampled due to product.

NSVD = Not surveyed.

SUNOCO SERVICE STATION #0000-1289
181 Delaware Avenue
Buffalo, New York 14202

TABLE 2
Hydrocarbon Recovery Table

Date	System Hourmeter (hours)	System Uptime (%)	Soil Vapor Extraction				Air Sparge		Vapor Phase Recovery							Injection Information				
			System Vacuum (" H ₂)	Air Flow (scfm)	Air Flow per Period (cubic feet)	Cumulative Air Flow (cubic feet)	Effluent VOC Concentration (ppm)	Air Pressure (psi)	Air Flow (scfm)	Estimated Hydrocarbon Recovery (lbs of BTEX/hr)	Estimated Recovery for Period (lbs of BTEX)	Estimated Cumulative Recovery (lbs of BTEX)	Benzene Emission (ppm)	NYSDEC Benzene Limit (ppm)	Benzene Emission (lbs/hr)	NYSDEC Benzene Limit (lbs/hr)	Air Injected per Period (cubic foot)	Cumulative Air Injected (cubic foot)	Oxygen Injected per Period (pounds)	Cumulative Oxygen Injected (pounds)
07/14/08	4	100%	7	207	2.0E+06	0	30	0	0	0.090	0.09	0.09	0.07	0.00	0.0015	0.00000	0	0	0	0
07/21/08	165	96%	6	211	2.0E+06	2.0E+06	13	0	0	0.038	6	6	0.03	1.89	0.0007	0.00494	0	0	0	0
07/28/08	167	1%	6	211	2.5E+04	2.1E+06	92	0	0	0.003	1	7	0.23	1.89	0.0046	0.00494	-	-	-	-
08/08/08	168	0%	4	229	1.4E+04	2.1E+06	68	9	30	0.001	0	7	0.19	1.75	0.0037	0.00494	89,100	89,100	1,741	1,741
08/28/08	168	0%	3	238	0.0E+00	2.1E+06	268	19	11	0.000	0	7	0.76	1.68	0.0152	0.00494	59,400	148,500	1,160	2,901
09/22/08	764	99%	4	229	8.2E+06	1.0E+07	1250	9	47	4.105	0	7	3.41	1.75	0.0682	0.00494	12,690	161,190	248	3,149
09/29/08	926	98%	2	247	2.4E+06	1.3E+07	392	0	0	1.348	225	232	1.15	1.62	0.0231	0.00494	-	161,190	-	3,149
10/01/08	980	100%	2	247	7.1E+05	1.3E+07	195	0	0	0.695	32	264	0.57	1.62	0.0115	0.00494	-	161,190	-	3,149
10/30/08	1,652	97%	3	238	9.6E+06	2.3E+07	46.6	0	0	0.155	108	372	0.13	1.68	0.0026	0.00494	-	161,190	-	3,149
11/14/08	2,033	100%	3	238	5.1E+06	2.8E+07	7.0	0	0	0.024	8	380	0.02	1.68	0.0004	0.00494	-	161,190	-	3,149
11/21/08	2,205	100%	3	238	2.4E+06	3.1E+07	200	0	0	0.687	115	496	0.57	1.68	0.0113	0.00494	-	161,190	-	3,149
11/24/08	2,274	96%	3	238	9.9E+05	3.1E+07	22.3	0	0	0.073	5	501	0.06	1.68	0.0013	0.00494	-	161,190	-	3,149
12/02/08	2,466	100%	3	238	2.7E+06	3.4E+07	22	0	0	0.076	14	515	0.06	1.68	0.0012	0.00494	-	161,190	-	3,149
12/22/08	2,948	100%	7	207	6.0E+06	4.0E+07	4.3	0	0	0.013	6	521	0.01	1.93	0.0002	0.00494	-	161,190	-	3,149
12/30/08	3,137	99%	3	238	2.7E+06	4.3E+07	20.6	0	0	0.070	13	534	0.06	1.68	0.0012	0.00494	-	161,190	-	3,149
01/09/09	3,317	75%	3	238	2.6E+06	4.5E+07	11.2	0	0	0.029	7	541	0.03	1.68	0.0005	0.00494	-	161,190	-	3,149
01/22/09	3,688	100%	3	238	4.5E+06	5.0E+07	0.0	0	0	0.000	0	541	0.00	1.68	0.0000	0.00494	-	161,190	-	3,149
02/11/09	4,171	100%	4	229	6.6E+06	5.7E+07	0.1	0	0	0.000	0	541	0.00	1.75	0.0000	0.00484	-	161,190	-	3,149
02/24/09	4,481	100%	3	238	4.4E+06	6.1E+07	0.0	0	0	0.000	0	541	0.00	1.68	0.0000	0.00494	-	161,190	-	3,149
03/02/09	4,621	97%	3	238	2.0E+06	6.3E+07	70.6	0	0	0.235	34	575	0.20	1.68	0.0040	0.00494	-	161,190	-	3,149
03/16/09	4,958	100%	4	229	4.6E+06	6.8E+07	0.0	0	0	0.000	0	575	0.00	1.75	0.0000	0.00494	-	161,190	-	3,149
04/15/09	5,677	100%	4	229	9.9E+06	7.7E+07	0.0	0	0	0.000	0	575	0.00	1.75	0.0000	0.00494	-	161,190	-	3,149
04/27/09	5,965	100%	5	220	3.8E+06	8.1E+07	1.1	0	0	0.003	1	576	0.00	1.82	0.0001	0.00494	-	161,190	-	3,149
05/13/09	6,350	100%	5	220	5.1E+06	8.6E+07	0.2	0	0	0.001	0	576	0.00	1.82	0.0000	0.00494	-	161,190	-	3,149
05/27/09	6,680	98%	6	211	4.2E+06	9.1E+07	0.0	0	0	0.000	0	576	0.00	1.89	0.0000	0.00494	-	161,190	-	3,149
06/10/09	7,019	100%	7	207	4.2E+06	9.5E+07	0.0	0	0	0.000	0	576	0.00	1.93	0.0000	0.00494	-	-	-	3,149
06/24/09	7,266	74%	6	211	3.1E+06	9.8E+07	0.0	0	0	0.000	0	576	0.00	1.89	0.0000	0.00494	-	-	-	3,149
07/08/09	7,302	11%	4	229	5.0E+05	9.8E+07	0.0	0	0	0.000	0	576	0.00	1.75	0.0000	0.00494	-	-	-	3,149
07/30/09	7,830	100%	5	220	7.0E+06	1.1E+08	0.2	0	0	0.001	0	576	0.00	1.82	0.0000	0.00494	-	90	-	3,149
08/19/09	7,967	29%	5	220	1.8E+06	1.1E+08	0.0	0	0	0.000	0	576	0.00	1.82	0.0000	0.00494	-	-	-	3,149
08/26/09	7,994	19%	3	238	3.8E+05	1.1E+08	2.6	0	0	0.002	0	576	0.01	1.68	0.0001	0.00494	-	12	-	3,149
09/15/09	8,497	100%	4	229	6.9E+06	1.1E+08	0.9	0	0	0.003	0	576	0.00	1.75	0.0000	0.00494	-	404	-	3,149
10/07/09	8,776	53%	5	220	3.7E+06	1.2E+08	0.1	0	0	0.000	0	576	0.00	1.82	0.0000	0.00494	-	13	-	3,149
11/17/09	9,591	83%	1	256	1.3E+07	1.3E+08	0.0	0	0	0.000	0	576	0.00	1.56	0.0000	0.00494	-	-	-	3,149

Notes:

All recovery data based on calculations adapted from API publication 4410 (1986).

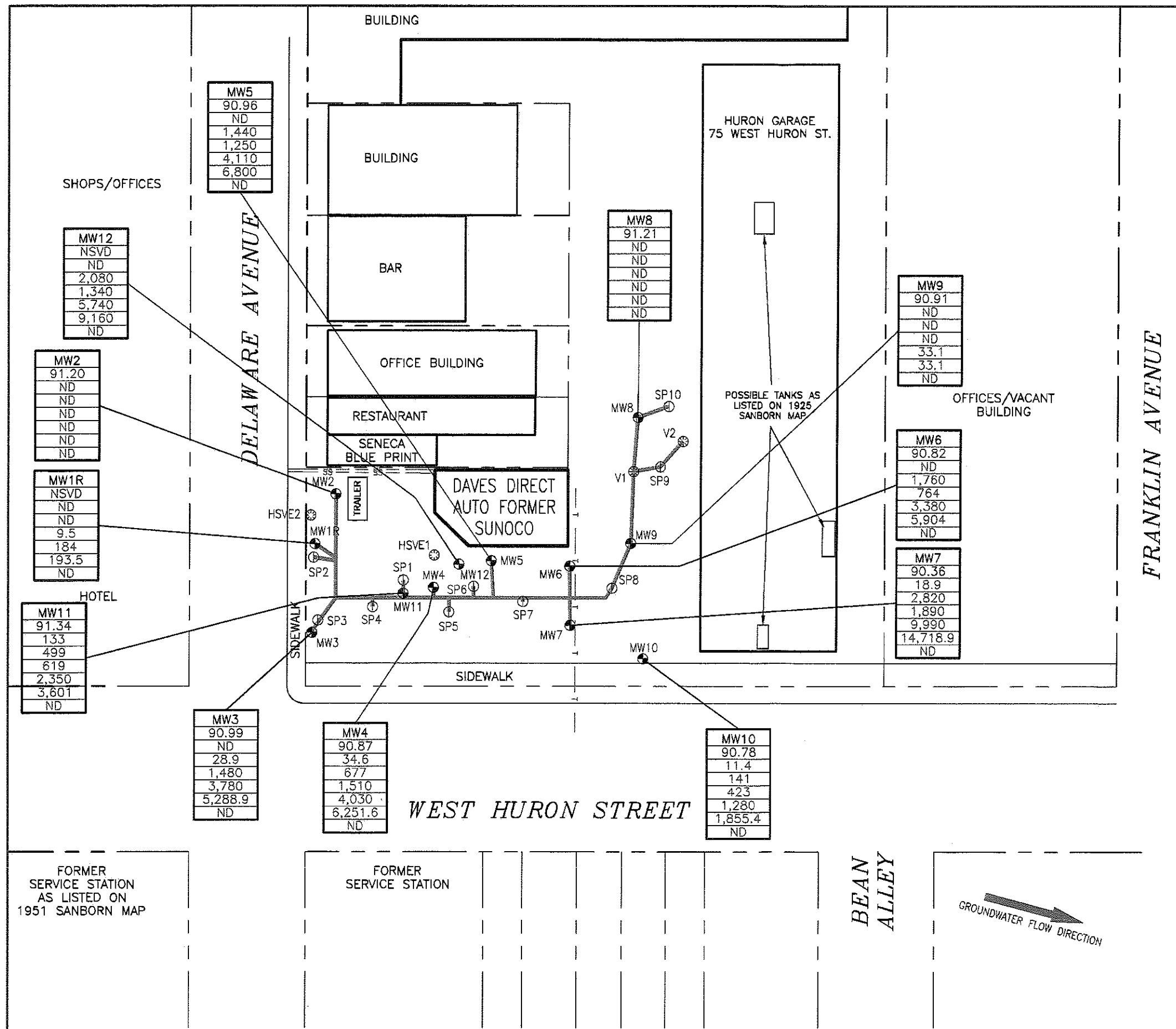
NC = Data not collected.

NA = Data not available

Effluent piping is 3-inch diameter.

SVE system flow (scfm) based on vacuum readings correlated to blower curve, Gardner Denver, 4MVP.



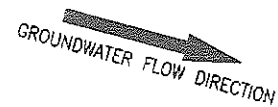


LEGEND

- ⊕ MONITORING WELL
 - ⊖ SPARGE WELL
 - ⊗ SOIL VAPOR EXTRACTION WELL
 - SS — UNDERGROUND SANITARY SEWER
 - T — UNDERGROUND TELEPHONE
 - UE — UNDERGROUND ELECTRIC
 - REMEDIAL SYSTEM LAYOUT
- | | |
|-------------|------------------------------------|
| MW1R | WELL IDENTIFICATION |
| NSVD | GROUNDWATER ELEVATION (feet) |
| ND | BENZENE CONCENTRATION (ug/L) |
| ND | TOLUENE CONCENTRATION (ug/L) |
| 9.5 | ETHYLBENZENE CONCENTRATION (ug/L) |
| 184 | TOTAL XYLENES CONCENTRATION (ug/L) |
| 193.5 | TOTAL BTEX CONCENTRATION (ug/L) |
| ND | MTBE CONCENTRATION (ug/L) |
- ug/L MICROGRAMS PER LITER
 BTEX BENZENE, TOLUENE, ETHYLBENZENE, XYLENES
 MTBE METHYL *tert*-BUTYL ETHER
 ND NOT DETECTED
 NSVD NO SURVEYED DATA

DRAFTED BY: B.C.S. (N.J.)	GROUNDWATER MONITORING MAP DECEMBER 7, 2010	
CHECKED BY:	FORMER SUNOCO SERVICE STATION #0000-1289 181 DELAWARE AVENUE BUFFALO, NEW YORK	
REVIEWED BY:	Groundwater & Environmental Services, Inc. 158 SONWIL DRIVE, CHEEKTOWAGA, NEW YORK 14225	
NORTH 	SCALE IN FEET	DATE
		12-23-10
		FIGURE
		1

M:\Graphics\0900-Buffalo\Sunoco\0000-1289 Buffalo (delaware ave.)\0000-1289 Buffalo (delaware ave.) S.M.dwg, B.Silvestri

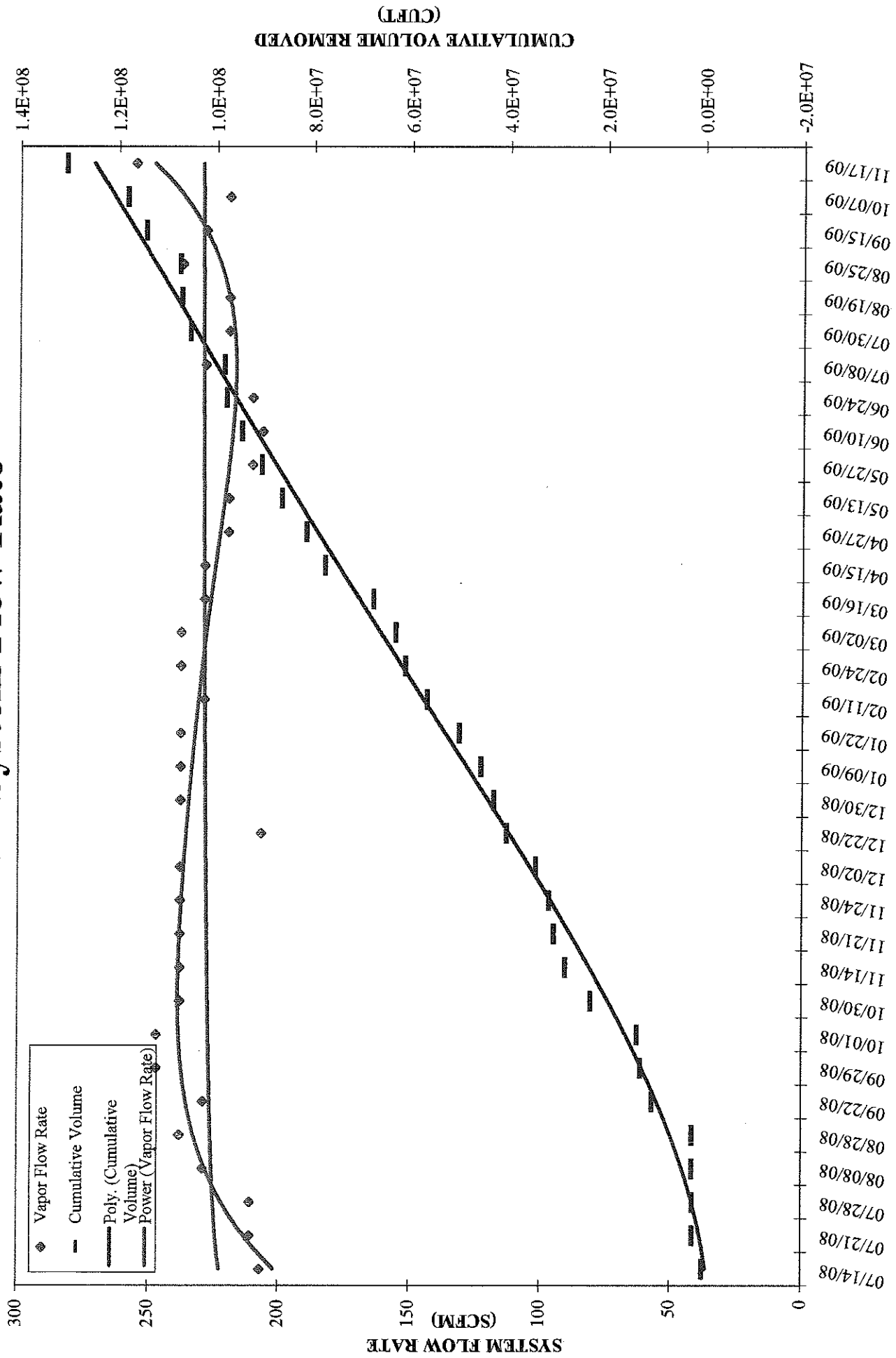


BEAN ALLEY

FORMER SERVICE STATION AS LISTED ON 1951 SANBORN MAP

FORMER SERVICE STATION

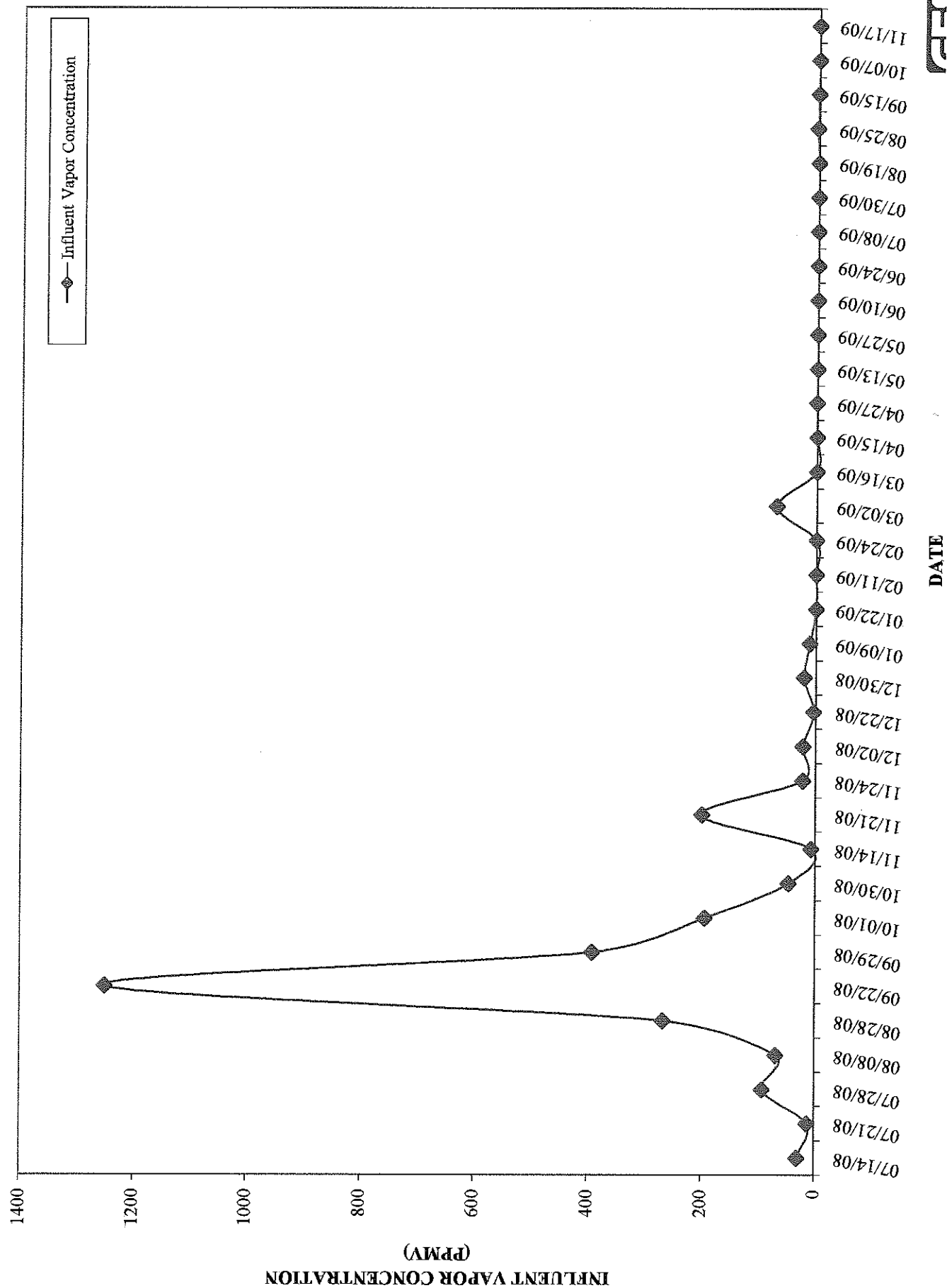
SVE System Flow Rate



DATE



SVE System Influent Concentration

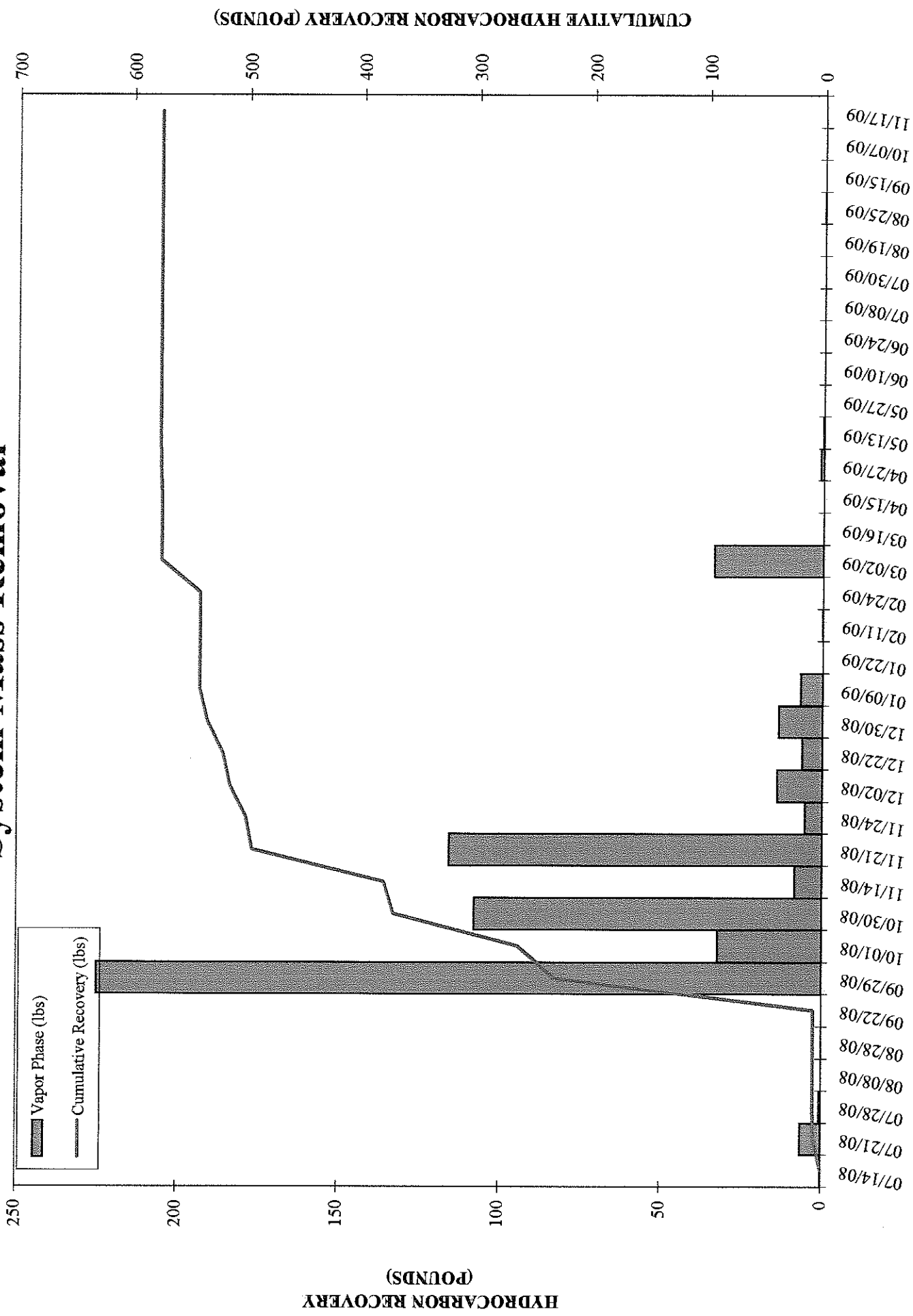


DATE





System Mass Removal

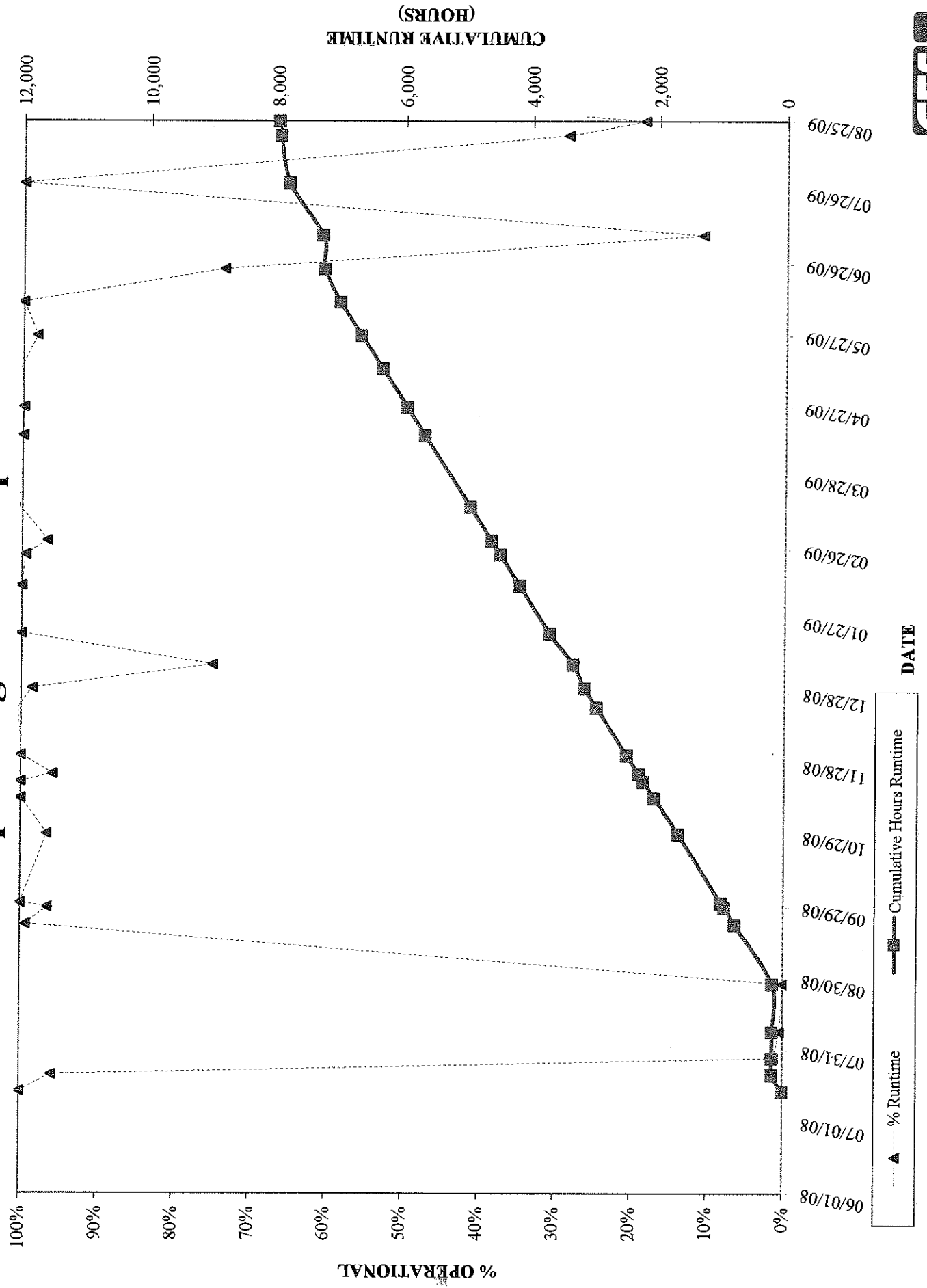


HYDROCARBON RECOVERY (POUNDS)

CUMULATIVE HYDROCARBON RECOVERY (POUNDS)



Operating Time Graph



December 20, 2010

Mr. Eric Popken
Groundwater & Environmental Services -
Buffalo, NY
158 Sonwil Drive
Buffalo, NY 14225

RE: Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Dear Mr. Popken:

Enclosed are the analytical results for sample(s) received by the laboratory on December 09, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rachel Christner

rachel.christner@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Page 1 of 20

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without the written consent of Pace Analytical Services, Inc..



CERTIFICATIONS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California/NELAC Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH 0694
Delaware Certification
Florida/NELAC Certification #: E87683
Guam/PADEP Certification
Hawaii/PADEP Certification
Idaho Certification
Illinois/PADEP Certification
Indiana/PADEP Certification
Iowa Certification #: 391
Kansas/NELAC Certification #: E-10358
Kentucky Certification #: 90133
Louisiana/NELAC Certification #: LA080002
Louisiana/NELAC Certification #: 4086
Maine Certification #: PA0091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nevada Certification
New Hampshire/NELAC Certification #: 2976
New Jersey/NELAC Certification #: PA 051
New Mexico Certification
New York/NELAC Certification #: 10888
North Carolina Certification #: 42706
Oregon/NELAC Certification #: PA200002
Pennsylvania/NELAC Certification #: 65-00282
Puerto Rico Certification #: PA01457
South Dakota Certification
Tennessee Certification #: TN2867
Texas/NELAC Certification #: T104704188-09 TX
Utah/NELAC Certification #: ANTE
Virgin Island/PADEP Certification
Virginia Certification #: 00112
Washington Certification #: C1941
West Virginia Certification #: 143
Wisconsin/PADEP Certification
Wyoming Certification #: 8TMS-Q

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3038411001	MW-1R	EPA 8260	JAS	8	PASI-PA
3038411002	MW-2	EPA 8260	JAS	8	PASI-PA
3038411003	MW-3	EPA 8260	JAS	8	PASI-PA
3038411004	MW-4	EPA 8260	JAS	8	PASI-PA
3038411005	MW-5	EPA 8260	JAS	8	PASI-PA
3038411006	MW-6	EPA 8260	JAS	8	PASI-PA
3038411007	MW-7	EPA 8260	JAS	8	PASI-PA
3038411008	MW-8	EPA 8260	JAS	8	PASI-PA
3038411009	MW-9	EPA 8260	JAS	8	PASI-PA
3038411010	MW-10	EPA 8260	JAS	8	PASI-PA
3038411011	MW-11	EPA 8260	JAS	8	PASI-PA
3038411012	MW-12	EPA 8260	JAS	8	PASI-PA

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Method: EPA 8260
Description: 8260 MSV PA UST
Client: Sunoco_GES-Buffalo
Date: December 20, 2010

General Information:

12 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: MSV/7983

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- MW-4 (Lab ID: 3038411004)
- Toluene-d8 (S)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/7983

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-1R		Lab ID: 3038411001	Collected: 12/07/10 17:00	Received: 12/09/10 10:30	Matrix: Water			
8260 MSV PA UST								
Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1		12/11/10 02:48	71-43-2	
Ethylbenzene	9.5	ug/L	5.0	1		12/11/10 02:48	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 02:48	1634-04-4	
Toluene	ND	ug/L	5.0	1		12/11/10 02:48	108-88-3	
Xylene (Total)	184	ug/L	5.0	1		12/11/10 02:48	1330-20-7	
Toluene-d8 (S)	112	%	70-130	1		12/11/10 02:48	2037-26-5	
4-Bromofluorobenzene (S)	115	%	70-130	1		12/11/10 02:48	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	70-130	1		12/11/10 02:48	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-2		Lab ID: 3038411002	Collected: 12/07/10 11:40	Received: 12/09/10 10:30	Matrix: Water			
8260 MSV PA UST		Analytical Method: EPA 8260						
Benzene	ND	ug/L	5.0	1		12/11/10 03:14	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1		12/11/10 03:14	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 03:14	1634-04-4	
Toluene	ND	ug/L	5.0	1		12/11/10 03:14	108-88-3	
Xylene (Total)	ND	ug/L	5.0	1		12/11/10 03:14	1330-20-7	
Toluene-d8 (S)	112	%	70-130	1		12/11/10 03:14	2037-26-5	
4-Bromofluorobenzene (S)	109	%	70-130	1		12/11/10 03:14	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130	1		12/11/10 03:14	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Sample: **MW-3** Lab ID: **3038411003** Collected: 12/07/10 16:30 Received: 12/09/10 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8260 MSV PA UST

Analytical Method: EPA 8260

Benzene	ND	ug/L	5.0	1		12/11/10 03:40	71-43-2	
Ethylbenzene	1480	ug/L	250	50		12/16/10 19:55	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 03:40	1634-04-4	
Toluene	28.9	ug/L	5.0	1		12/11/10 03:40	108-88-3	
Xylene (Total)	3780	ug/L	250	50		12/16/10 19:55	1330-20-7	
Toluene-d8 (S)	129	%	70-130	1		12/11/10 03:40	2037-26-5	
4-Bromofluorobenzene (S)	118	%	70-130	1		12/11/10 03:40	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130	1		12/11/10 03:40	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Sample: **MW-4** Lab ID: **3038411004** Collected: 12/07/10 11:50 Received: 12/09/10 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV PA UST		Analytical Method: EPA 8260						
Benzene	34.6	ug/L	5.0	1		12/11/10 04:06	71-43-2	
Ethylbenzene	1510	ug/L	250	50		12/16/10 20:21	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 04:06	1634-04-4	
Toluene	677	ug/L	250	50		12/16/10 20:21	108-88-3	
Xylene (Total)	4030	ug/L	250	50		12/16/10 20:21	1330-20-7	
Toluene-d8 (S)	136	%	70-130	1		12/11/10 04:06	2037-26-5	S2
4-Bromofluorobenzene (S)	125	%	70-130	1		12/11/10 04:06	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-130	1		12/11/10 04:06	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Sample: MW-5 Lab ID: 3038411005 Collected: 12/07/10 13:00 Received: 12/09/10 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV PA UST		Analytical Method: EPA 8260						
Benzene	ND	ug/L	5.0	1		12/11/10 04:32	71-43-2	
Ethylbenzene	1250	ug/L	250	50		12/16/10 20:47	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 04:32	1634-04-4	
Toluene	1440	ug/L	250	50		12/16/10 20:47	108-88-3	
Xylene (Total)	4110	ug/L	250	50		12/16/10 20:47	1330-20-7	
Toluene-d8 (S)	124	%	70-130	1		12/11/10 04:32	2037-26-5	
4-Bromofluorobenzene (S)	117	%	70-130	1		12/11/10 04:32	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130	1		12/11/10 04:32	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-6		Lab ID: 3038411006	Collected: 12/07/10 13:05	Received: 12/09/10 10:30	Matrix: Water			
8260 MSV PA UST		Analytical Method: EPA 8260						
Benzene	ND	ug/L	5.0	1		12/11/10 04:58	71-43-2	
Ethylbenzene	764	ug/L	200	40		12/16/10 21:14	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 04:58	1634-04-4	
Toluene	1760	ug/L	200	40		12/16/10 21:14	108-88-3	
Xylene (Total)	3380	ug/L	200	40		12/16/10 21:14	1330-20-7	
Toluene-d8 (S)	121	%	70-130	1		12/11/10 04:58	2037-26-5	
4-Bromofluorobenzene (S)	117	%	70-130	1		12/11/10 04:58	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130	1		12/11/10 04:58	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Sample: MW-7 Lab ID: 3038411007 Collected: 12/07/10 14:30 Received: 12/09/10 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV PA UST		Analytical Method: EPA 8260						
Benzene	18.9	ug/L	5.0	1		12/11/10 05:24	71-43-2	
Ethylbenzene	1890	ug/L	500	100		12/16/10 21:40	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 05:24	1634-04-4	
Toluene	2820	ug/L	500	100		12/16/10 21:40	108-88-3	
Xylene (Total)	9990	ug/L	500	100		12/16/10 21:40	1330-20-7	
Toluene-d8 (S)	126	%	70-130	1		12/11/10 05:24	2037-26-5	
4-Bromofluorobenzene (S)	118	%	70-130	1		12/11/10 05:24	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130	1		12/11/10 05:24	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-8		Lab ID: 3038411008		Collected: 12/07/10 17:30		Received: 12/09/10 10:30		Matrix: Water
8260 MSV PA UST								
Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1		12/16/10 19:02	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1		12/16/10 19:02	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/16/10 19:02	1634-04-4	
Toluene	ND	ug/L	5.0	1		12/16/10 19:02	108-88-3	
Xylene (Total)	ND	ug/L	5.0	1		12/16/10 19:02	1330-20-7	
Toluene-d8 (S)	86 %		70-130	1		12/16/10 19:02	2037-26-5	
4-Bromofluorobenzene (S)	89 %		70-130	1		12/16/10 19:02	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130	1		12/16/10 19:02	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-9		Lab ID: 3038411009	Collected: 12/07/10 13:30	Received: 12/09/10 10:30	Matrix: Water			
8260 MSV PA UST								
Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1		12/11/10 06:16	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1		12/11/10 06:16	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 06:16	1634-04-4	
Toluene	ND	ug/L	5.0	1		12/11/10 06:16	108-88-3	
Xylene (Total)	33.1	ug/L	5.0	1		12/11/10 06:16	1330-20-7	
Toluene-d8 (S)	106	%	70-130	1		12/11/10 06:16	2037-26-5	
4-Bromofluorobenzene (S)	112	%	70-130	1		12/11/10 06:16	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130	1		12/11/10 06:16	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-10		Lab ID: 3038411010		Collected: 12/07/10 13:45		Received: 12/09/10 10:30		Matrix: Water
8260 MSV PA UST								
Analytical Method: EPA 8260								
Benzene	11.4	ug/L	5.0	1		12/11/10 06:42	71-43-2	
Ethylbenzene	423	ug/L	200	40		12/16/10 22:06	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 06:42	1634-04-4	
Toluene	141	ug/L	5.0	1		12/11/10 06:42	108-88-3	
Xylene (Total)	1280	ug/L	200	40		12/16/10 22:06	1330-20-7	
Toluene-d8 (S)	120	%	70-130	1		12/11/10 06:42	2037-26-5	
4-Bromofluorobenzene (S)	118	%	70-130	1		12/11/10 06:42	460-00-4	
1,2-Dichloroethane-d4 (S)	117	%	70-130	1		12/11/10 06:42	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Sample: MW-11		Lab ID: 3038411011	Collected: 12/07/10 11:45	Received: 12/09/10 10:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV PA UST		Analytical Method: EPA 8260						
Benzene	133 ug/L		5.0	1		12/11/10 07:08	71-43-2	
Ethylbenzene	619 ug/L		200	40		12/16/10 22:32	100-41-4	
Methyl-tert-butyl ether	ND ug/L		5.0	1		12/11/10 07:08	1634-04-4	
Toluene	499 ug/L		200	40		12/16/10 22:32	108-88-3	
Xylene (Total)	2350 ug/L		200	40		12/16/10 22:32	1330-20-7	
Toluene-d8 (S)	121 %		70-130	1		12/11/10 07:08	2037-26-5	
4-Bromofluorobenzene (S)	118 %		70-130	1		12/11/10 07:08	460-00-4	
1,2-Dichloroethane-d4 (S)	115 %		70-130	1		12/11/10 07:08	17060-07-0	

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Sample: MW-12 Lab ID: 3038411012 Collected: 12/07/10 14:20 Received: 12/09/10 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV PA UST		Analytical Method: EPA 8260						
Benzene	ND	ug/L	5.0	1		12/11/10 07:34	71-43-2	
Ethylbenzene	1340	ug/L	500	100		12/16/10 22:58	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		12/11/10 07:34	1634-04-4	
Toluene	2080	ug/L	500	100		12/16/10 22:58	108-88-3	
Xylene (Total)	5740	ug/L	500	100		12/16/10 22:58	1330-20-7	
Toluene-d8 (S)	130	%	70-130	1		12/11/10 07:34	2037-26-5	
4-Bromofluorobenzene (S)	114	%	70-130	1		12/11/10 07:34	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	70-130	1		12/11/10 07:34	17060-07-0	

QUALITY CONTROL DATA

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

QC Batch: MSV/7983 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 3038411001, 3038411002, 3038411003, 3038411004, 3038411005, 3038411006, 3038411007, 3038411009, 3038411010, 3038411011, 3038411012

METHOD BLANK: 247650 Matrix: Water
Associated Lab Samples: 3038411001, 3038411002, 3038411003, 3038411004, 3038411005, 3038411006, 3038411007, 3038411009, 3038411010, 3038411011, 3038411012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	12/10/10 23:45	
Ethylbenzene	ug/L	ND	5.0	12/10/10 23:45	
Methyl-tert-butyl ether	ug/L	ND	5.0	12/10/10 23:45	
Toluene	ug/L	ND	5.0	12/10/10 23:45	
Xylene (Total)	ug/L	ND	5.0	12/10/10 23:45	
1,2-Dichloroethane-d4 (S)	%	111	70-130	12/10/10 23:45	
4-Bromofluorobenzene (S)	%	111	70-130	12/10/10 23:45	
Toluene-d8 (S)	%	108	70-130	12/10/10 23:45	

LABORATORY CONTROL SAMPLE: 247651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	22.2	111	70-130	
Ethylbenzene	ug/L	20	22.7	114	70-130	
Methyl-tert-butyl ether	ug/L	20	25.5	127	70-130	
Toluene	ug/L	20	22.5	113	70-130	
Xylene (Total)	ug/L	60	68.9	115	70-130	
1,2-Dichloroethane-d4 (S)	%			116	70-130	
4-Bromofluorobenzene (S)	%			115	70-130	
Toluene-d8 (S)	%			114	70-130	

QUALITY CONTROL DATA

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

QC Batch: MSV/8032 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 3038411008

METHOD BLANK: 249545 Matrix: Water
Associated Lab Samples: 3038411008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	12/16/10 15:06	
Ethylbenzene	ug/L	ND	5.0	12/16/10 15:06	
Methyl-tert-butyl ether	ug/L	ND	5.0	12/16/10 15:06	
Toluene	ug/L	ND	5.0	12/16/10 15:06	
Xylene (Total)	ug/L	ND	5.0	12/16/10 15:06	
1,2-Dichloroethane-d4 (S)	%	94	70-130	12/16/10 15:06	
4-Bromofluorobenzene (S)	%	87	70-130	12/16/10 15:06	
Toluene-d8 (S)	%	86	70-130	12/16/10 15:06	

LABORATORY CONTROL SAMPLE: 249546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	17.3	87	70-130	
Ethylbenzene	ug/L	20	17.0	85	70-130	
Methyl-tert-butyl ether	ug/L	20	19.8	99	70-130	
Toluene	ug/L	20	17.2	86	70-130	
Xylene (Total)	ug/L	60	52.8	88	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			89	70-130	
Toluene-d8 (S)	%			88	70-130	

QUALIFIERS

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: MSV/7983

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

S2 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DUNS 00001289 181 Delaware
Pace Project No.: 3038411

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3038411001	MW-1R	EPA 8260	MSV/7983		
3038411002	MW-2	EPA 8260	MSV/7983		
3038411003	MW-3	EPA 8260	MSV/7983		
3038411004	MW-4	EPA 8260	MSV/7983		
3038411005	MW-5	EPA 8260	MSV/7983		
3038411006	MW-6	EPA 8260	MSV/7983		
3038411007	MW-7	EPA 8260	MSV/7983		
3038411008	MW-8	EPA 8260	MSV/8032		
3038411009	MW-9	EPA 8260	MSV/7983		
3038411010	MW-10	EPA 8260	MSV/7983		
3038411011	MW-11	EPA 8260	MSV/7983		
3038411012	MW-12	EPA 8260	MSV/7983		



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company: Groundwater & Environmental Services		Report To: epopkwa@gesconline.com		Attention: GES - same as "A"	
Address: 158 Sorvil Drive		Copy To: mnabon@gesconline.com		Company Name:	
Cheekowaga NY 14225		Purchase Order No.:		Address:	
Email To: epopkwa@gesconline.com		Project Name: 181 Delaware Ave., Buffalo, New York		Pace Quote Reference: Standard Sinecco Rates	
Phone: 716-706-0074 Fax: 716-706-0075		Project Number: DUNSR 0000-1289		Pace Project Manager: Raelyn Sylvester	
Requested Due Date/TAT: Bid.		Pace Profile #:		Pace Project Number:	

ITEM #	Section D Required Client Information		Section E Required Project Information		Section F Required Analytical Information		Section G Required Matrix Information		Section H Required Collection Information		Section I Required Preservation Information		Section J Required Regulatory Agency Information	
	M	W	DATE	TIME	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
1			12/10	1300	WT G	G	12/10	1300						
2			11/10		WT G	G	11/10							
3			11/30		WT G	G	11/30							
4			11/30		WT G	G	11/30							
5			12/03		WT G	G	12/03							
6			12/05		WT G	G	12/05							
7			11/30		WT G	G	11/30							
8			11/30		WT G	G	11/30							
9			11/30		WT G	G	11/30							
10			11/30		WT G	G	11/30							
11			11/30		WT G	G	11/30							
12			11/30		WT G	G	11/30							

Additional Comments:		Hold Trip Blank	
RELINQUISHED BY/AFFILIATION: <i>Brent Wilkell</i>		ACCEPTED BY/AFFILIATION: <i>April Guller</i>	
DATE: 12/10/10		DATE: 12/10/10	
TIME: 1300		TIME: 1300	
TEMP IN °C:		TEMP IN °C:	
RECEIVED ON:		RECEIVED ON:	
SEALING CONDITIONS:		SEALING CONDITIONS:	
CUSTODY:		CUSTODY:	
SAMPLES INACT:		SAMPLES INACT:	

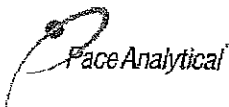
SAMPLER NAME AND SIGNATURE

PRINT NAME OF SAMPLER: *Brent Wilkell*

SIGNATURE OF SAMPLER: *Brent Wilkell*

DATE SIGNED (MM/DD/YYYY): 12/07/10

TB 013



Sample Condition Upon Receipt

S113

Client Name: CES Project # 3038411

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 57355786336

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 3 5

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 2.6

Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: <u>12/9/10</u>
--

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>AM</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <u>VOA</u> , coliform, TOC, O&G, Wf-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>AM</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature] Date: 12/10/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-7
2010 GPR Survey & Document Review (Iyer Environmental)



MEMORANDUM

TO:	Francine Gallego, NYSDEC
COPY:	Robert Knoer, Mark Croce (Hurondel LLC)
FROM:	Dharma Iyer (IEG)
DATE:	October 12, 2011 (EDITED 10/28/11)
RE:	77 WEST HURON – GPR Survey and Review of Previous Documents Spill Nos. 0375208 and 1106834

BACKGROUND

The 77 West Huron property, owned by Hurondel LLC, has been the subject of investigations and remedial action since 2001, along with two adjacent properties - 181 Delaware Avenue (Former Sunoco Gas Station) to the west, and 75 West Huron (parking garage) to the east. The 75-77 West Huron address has been associated with Spill No. 0375208 following the report of petroleum contamination in July 2003 to the NYSDEC. Site assessments and remedial actions associated with this spill number span across the three contiguous properties, including investigations and groundwater monitoring (GZA, Nature's Way and GES) from 2003 to 20010, remedial efforts (air sparging/soil vapor extraction, AS/SVE, by GES) from 2007 to 2009, and a pilot test (bioaugmentation with oxygen injection by Matrix) in May/June 2011. In September 2011, the NYSDEC separated the 181 Delaware Avenue property from this group and issued spill no. 1106834 under which all further work associated with this site will be performed, including the proposed remediation (oxygen injection and bioaugmentation) by Matrix.

During the last round of investigation/monitoring, Matrix delineated three separate plumes of petroleum contamination, one spanning across the 181 Delaware property, and two small separate plumes in the southern half of the 77 West Huron parking lot. Questions arose about the possible presence of old UST(s) and/or a source of petroleum contamination within 77 West Huron. IEG was retained by Hurondel LLC to conduct a ground penetrating radar (GPR) survey to locate USTs and/or identify the possible source of the petroleum contamination within 77 West Huron, and review associated historical documents. The results of this GPR survey and document review are described below.

A. GPR SURVEY at 77 WEST HURON

On September 23, 2011, Pegasus (Spencerport, NY) used a GPR with a 400 MHz antenna to scan an L-shaped area, extending from the 77 West Huron parking lot to the parking area north of the 75 West Huron building (see Figure 1). The method used is a "line scan," where random transects are scanned to pick up subsurface anomalies and disturbances. The GPR survey was supplemented with a scan of the area by a Schonstedt metal detector. The GPR survey report, with images, anomalies and descriptions, from Pegasus are attached. The attached photo pages show areas of anomalies and disturbances marked in the field.

Figure 2 delineates and describes areas where the GPR and metal detector indicated subsurface anomalies. Most of these areas appear to be disturbed geology, including soil excavation and

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From D. Iyer to Francine Gallego, NYSDEC
Subject: GPR Survey & Document Review

backfilling, and two small areas (G6 and G7) indicated possible UST, albeit at a shallower depth. None of these areas exhibited a GPR profile matching that of a UST (see example attached). It should be noted that the southern half of the parking lot has had several disturbances over the years, from test pits in 2001 to AS/SVE wells and trenches in 2007. Based on the GPR and metal detector survey, it appears unlikely that USTs may be present in the 77 West Huron parking lot. The following summarizes the findings of the GPR and metal detector survey:

- Anomalies were observed in seven (7) GPR and seven (7) metal detector areas (see Figure 1)
- GPR areas G1 through G5 appear to be from disturbed geology, excavations, backfill
- G6 (at 2001 test pit TP3) is highly suspect but GPR profile is not similar to that of a typical UST
- G7, just west of Auto Service building is also highly suspect, with possible UST or pipe. A 1951 Sanborn Map (attached as Figure 4) indicates "Gas ST" at this location. However, the GPR profile at this location also does not match that of a typical UST.

B. PREVIOUS SOIL/GROUNDWATER INVESTIGATIONS

IEG reviewed documents related to the three parcels, dating from 1993 through 2011. Figures 3A and 3B show sample locations and highlights areas of elevated contamination. The following summarizes the findings from this document review.

- 1993 Phase I ESA Report by Enasco Inc. for 75 West Huron (6-story brick building)
 - Indicated the then presence of two 275-gallon ASTs in good condition as well as 10 empty 55-gallon metal drums
 - Recommended removal of the ASTs and drums
- 1999 Phase I ESA Report by Maxim for 75-77 West Huron
 - Referenced 1925 Sanborn fire insurance map showing 3 gasoline USTs on 77 West Huron parcel
 - Referenced City of Buffalo records indicating the installation and removal of various sized USTs; no maps were included to show the locations of these USTs
 - No indication of whether all USTs were removed
 - 181 Delaware Avenue property shown as a NYSDEC spill site (nos. 9301417, 9302329, and 9416399) due to release of waste oil and antifreeze
 - Recommended Phase II ESA
- 2001 Phase II ESI Report by Benchmark for 77 West Huron
 - Dug 6 test pits on 77 West Huron – depth up to 6' bgs
 - No contamination at less than 6' bgs
 - No USTs/fill ports were unearthed, particularly at TP1, TP2 and TP3 where the 1925 Sanborn map showed "Gas ST"
- 2003 Phase II Investigation Report by GZA for 75-77 West Huron
 - 10 Geoprobe locations on 77 West Huron parcel – depth from 12' to 20' bgs
 - Soil VOCs @ B2 = 294 ppm (west boundary), and B6 = 335 ppm (middle of parking lot)
 - GW VOCs @ B1 = 1.4 (south sidewalk), and B4 = 3.3 ppm (southwest side of building)
 - No USTs were discovered during the investigation

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From D. Iyer to Francine Gallego, NYSDEC
Subject: GPR Survey & Document Review

- 2003 Subsurface Investigation Report by Nature's Way for 181 Delaware Avenue
 - Completed 10 earth probes/borings – 7 borings to 12' bgs and 3 borings to 16' bgs
 - Soil VOCs ranged from 390 to 1842 ppm
 - 5 out of 7 soil samples (excluding 2 sidewalk samples) were well above TAGM 4046 values
 - Soil VOCs even in previously excavated areas
 - Report concluded that 181 Delaware Ave site is most likely the source of contamination on the adjacent property to the east (Hudson Street Garage)

- 2004 ESA Report by GES for 181 Delaware Avenue
 - No USTs were evident at this site or the 75 West Huron properties
 - Depth to groundwater ranged from 7.8' to 9.2' bgs
 - Groundwater flow is to the southeast with a gradient of 0.05 ft/ft
 - Completed soil borings and installed wells at 8 locations (MW-1 to MW-7, SP-1) on 181 Delaware – depth to 20' bgs; also completed one remedial air-spargue well (SP-1)
 - Soil VOCs ranged from 14 to 1,479 ppm; and GW VOCs ranged from 0.2 to 30.4 ppm
 - VOCs maximum at MW-5 in front of building; wells MW-6 and MW-7 along eastern property boundary with 77 West Huron respectively had 211 and 51 ppm total VOCs
 - Total VOCs in groundwater at MW-5, MW-6 and MW-7 are 16.5, 16.2 and 20.1 ppm respectively
 - In site maps/figures in this and all subsequent reports, GES included the notation "Possible USTs" within the 75 West Huron building, which is inaccurate for the following reasons:
 - Previous Phase I and II ESAs (Enasco, Benchmark, GZA, Nature's Way, GES) did not find USTs, fill pipes or VOCs in air in the basement of the building at 75 West Huron
 - Groundwater is 7' – 10' bgs; Basement floor is greater 10' bgs
 - GW flow is to the southeast; therefore highly contaminated groundwater at MW-5, MW-6 and MW-7 would be moving east beneath the 77 West Huron property and towards 75 West Huron; the 75 West Huron property would have no impact to the west
 - Garage was built in 1894 – unlikely for USTs to have been installed below basement floor in the 1900s
 - NVEC had already concluded in the 2003 Subsurface Investigation report that the source at 181 Delaware impacted the 75-77 West Huron properties

- 2004 to 2006 GW Monitoring Reports by GES FOR 181 Delaware Ave.
 - In 2005, GES installed three (3) new monitoring wells (MW-8, MW-9 and MW-10) at the 77 West Huron property; In 2006, installed MW-11 in the middle of 181 Delaware Ave parcel
 - In 2006, groundwater BTEX was 11.3 ppm at MW-6 and 16.1 ppm at MW-7; levels thus remained high in many wells, including MW-6 and MW-7 along east property boundary with 77 West Huron; wells MW-2, MW-3, MW-5 and MW-8 showed some decrease in groundwater BTEX over these 3 years
 - No USTs were discovered during the well installation at 77 West Huron

- 2007 Indoor Air Sampling Reports by GES and IEG at 75 West Huron
 - In January 2007, GES collected three air samples in the building basement and one outside
 - GES did not find any VOC compounds in the air above the respective PEL levels; GES concluded that there was no indication of air contamination as a result of petroleum products
 - In April 2004, IEG screened air and water in the basement for VOCs using a PID

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From D. Iyer to Francine Gallego, NYSDEC
Subject: GPR Survey & Document Review

- IEG found an elevated PID reading of 84.5 ppm in the south section of the basement, which subsequently dropped to 9 ppm; sump water sample from the south section also had an elevated PID reading of 8.3 ppm
 - IEG concluded that contaminated groundwater entering the basement's south section most likely contributes to the persistent petroleum odor
- 2006 to 2010 Site Activity Reports by GES for 181 Delaware and 77 West Huron
- In early 2006, GES completed air sparging tests at SP-1, with MW-1, MW-4 and MW-11 as observation wells
 - In May/June 2008, GES installed an air sparge/soil vapor extraction system (AS/SVE) – included nine (9) air-sparge wells (SP-2 to SP-10) and two (2) soil vapor extraction wells (V-1 and V-2) on both 181 Delaware and 77 West Huron properties; the system was started up in July 2008
 - During the trenching, GES discovered two 1500-gallon USTs at 181 Delaware, along the western boundary and next to MW-1 and MW-2; these were closed in place
 - In June 2008, GES also conducted a GPR survey on the 181 Delaware property, and observed three anomalies, including the two USTs, and an inactive waste oil UST
 - In September 2008, vapors were noted inside on-site and adjacent buildings; GES suspended the air sparging, and mitigation activities were conducted until ambient PID readings were non-detect in the buildings
 - In November 2009, GES noticed that the SVE system operation created significant groundwater mounding that blanked off the SVE well screens
 - In December 2009, GES shut down the SVE system due to the groundwater mounding, underperformance with respect to vapor recovery, and inability to lower groundwater VOCs
 - No USTs were discovered at 77 West Huron during the trenching
- 2006 to 2010 Groundwater Monitoring by GES
- In March 2010, GES installed MW-12 in front of the auto service building at 181 Delaware
 - GES sampled the 12 wells periodically, and reported the following trends:
 - o At 181 Delaware, VOCs remained high in 7 groundwater monitoring wells, including MW-3, MW-4, MW-11 and MW-12 in the western half of the parcel, and MW-5, MW-6 and MW-7 in the eastern half;
 - o In December 2010, MW-7 had total BTEX of 14.7 ppm in groundwater compared to 16.5 ppm in June 2004; MW-6 had 5.9 ppm BTEX in 2010 compared to 13.6 ppm in 2004
 - o At 77 West Huron, groundwater VOCs were non-detect to low in MW-8 and MW-9; MW10, located downgradient from MW-7, went from 0.3 ppm in 2005 to 1.8 ppm in 2010
- 2010 Subsurface Investigation Results by Matrix for 181 Delaware and 77 West Huron
- Completed 18 soil borings (SB101-SB118) to depth of 20' bgs; two borings (SB112 and SB113) were converted to oxygen injection points
 - Soil samples were collected from 18 new borings, and groundwater was sampled from the 12 existing monitoring wells; depth to groundwater ranged from 7.5' to 10' bgs
 - Borings at 181 Delaware had soil VOCs ranging from 26 to 496 ppm; at 77 West Huron, soil VOCs ranged from non-detect to 650 ppm
 - Groundwater VOCs in wells at 181 Delaware ranged from 3.8 at MW-3 to 15.4 ppm at MW-7; at 77 West Huron, groundwater VOCs ranged from 0.05 ppm at MW-8 to 0.58 ppm at MW-10 (note: MW-10 is downgradient to MW-7)

Memorandum

From D. Iyer to Francine Gallego, NYSDEC
Subject: GPR Survey & Document Review

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CONCLUSION

The GPR/metal detector survey completed by IEG in September 2011 on the 77 West Huron property and the review of historical documents did not reveal any USTs at 77 West Huron that could be the source of the two distinct plumes delineated by Matrix in the parking lot. This conclusion is consistent with the findings of the GPR survey and the results reported in previous reports. Most significantly:

- GPR anomalies were observed across the parking lot of 77 West Huron, but all of them are indicative of the disturbance of subsurface geology; none of the GPR profiles matched that of a typical UST.
- No USTs were observed in the parking lot during the 1993 and 1999 Phase I ESAs, and subsequent investigations that involved intrusive work across the southern half.
- The 2003 test pit investigation did not find soil contamination in the vadose zone.
- The groundwater table is at 7.5' to 10' bgs, and soils with high VOCs were generally collected at depths greater than 12' bgs; the saturated soil contamination could therefore be associated with the migration of contaminated groundwater.
- The southern section of 77 West Huron lies directly downgradient from 181 Delaware, and has relatively the most soil and groundwater contamination; the contamination levels can therefore attributed to the source originating at 181 Delaware, and migrating southeast past MW-6 and MW-7.
- It is likely that intrusive investigation work in the past could have contributed to contamination migration from 181 Delaware towards the middle section of 77 West Huron. The migration may have also occurred as a result of the mounding of groundwater in the source area of 181 Delaware that occurred during the period the AS/SVE system was in operation.

In summary, there appears to be no identifiable source of contamination at the 77 West Huron property, and the low to medium levels of soil and groundwater contaminated may be attributed to the source at 181 Delaware. It would be futile to independently remedy the contamination at 77 West Huron before 181 Delaware is fully remediated. Moreover, the areal extent and level of contamination at 77 West Huron is relatively small compared to those at 181 Delaware. IEG therefore recommends that 77 West Huron be made part of the proposed remedial action for 181 Delaware.

BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-8
2013 Geoprobe Soil Investigation (Iyer Environmental)

REPORT

GEOPROBE SOIL INVESTIGATION

77 W. Huron Street, Buffalo, NY
(Spill #0375208)
February 2013

1.0 INTRODUCTION AND PURPOSE

Iyer Environmental Group PLLC (IEG) was retained by Hurondel LLC (Hurondel) to complete a Geoprobe Soil Investigation as a follow up to an October 2011 GPR survey, and questions about the possible presence of old UST(s) and/or source of petroleum contamination within the 77 W. Huron property. This report details field activities, laboratory analysis and results associated with this Investigation. The purpose of this soil investigation is to further assess recognized environmental conditions, to determine the nature and extent of contamination, and to provide clear guidance on any remediation necessary. This investigation included the collection of subsurface soil samples for VOC/SVOC analysis from across the site (see Figures 1 and 2, and survey map in Attachment B) and a survey of all sample locations.

2.0 SITE DESCRIPTION AND HISTORY

This irregular shaped, 0.216 acre parcel located at 77 W Huron Street (see Figure 1), is an asphalt parking lot which is currently being leased by auto drivers for parking spaces. A small parcel of the asphalt lot (75 W Huron St) is located at the northeast corner of the aforementioned lot and is also owned by Hurondel.

To the north is another asphalt parking lot which extends both west and east of 77 W. Huron. The eastern end of this lot borders the north side of the building at 73 W. Huron St which is also owned by Hurondel. To the south is West Huron Street and across this road is an office building at 80 W Huron St. To the west are five (5) commercial buildings. These include, from north to south, an Event Center (#199 Delaware Ave), an office building (#193), King's Court Restaurant (#189), Delaware Copy and Repo Center (#187), and Dave's Direct Performance Auto Repair shop (#181). The auto repair shop is the site of the former Sunoco Gas Station (Note: this site is shown as 183 Delaware Avenue in the Erie County property tax map).

The 77 W. Huron St. parking lot has been the subject of investigations since 2001, along with the two adjacent properties - 181 Delaware Avenue (Sunoco site) to the west, and 73 W Huron (parking garage) to the east. The 75-77 West Huron address was assigned Spill No. 0375208 following the report of petroleum contamination in July 2003 to the NYSDEC. Site assessments and remedial actions associated with this spill number spanned across the three contiguous properties, including investigations and groundwater monitoring (GZA, Nature's Way, GES and Matrix) from 2003 to 2010, remedial efforts (air sparging/soil vapor extraction, AS/SVE, by GES) from 2007 to 2009, and bioaugmentation with oxygen injection by Matrix in May/June 2011. In September 2011, the NYSDEC separated the 181 Delaware Avenue property from this group and issued spill no. 1106834 under which all further work by Matrix for Sunoco is being performed, including site remediation (oxygen injection and bioaugmentation).

Between 2004 and 2008, GES installed air-sparging (AS) and soil vapor extraction (SVE) points at the site, and converted selected monitoring wells for use as SVE points. The AS/SVE system was shut down in December 2009 after hydrocarbon vapors were detected in the on-site building and three neighboring buildings, and due to groundwater mounding and underperformance of the treatment system. Subsequently, GES installed horizontal soil vapor extraction laterals in 2010.



In a May 2011 Subsurface Investigation Report, Matrix delineated three separate plumes of petroleum contamination, one across the 181 Delaware property and extending into 77 W. Huron, and two small separate plumes in the southern half of the 77 W. Huron parking lot. Following a pilot test in 2011, Matrix implemented an in-situ treatment process comprising of oxygen injection and bioaugmentation. This system is still in operation.

Questions arose about the possible presence of old UST(s) and/or source of petroleum contamination within 77 W. Huron. In October 2011, IEG conducted a ground penetrating radar (GPR) survey of the 77 W. Huron parcel to locate USTs and/or identify the possible source of the petroleum contamination within 77 W. Huron, and reviewed associated historical documents (see IEG's October 28, 2011 Memo to the NYSDEC). Subsurface anomalies indicated by the GPR and metal detector are shown on Figure 2 along with plumes of contamination identified from previous investigations by Matrix. Most of the areas appeared to be disturbed geology, including soil excavation and backfilling. This is consistent with the fact that the southern half of the parking lot has been disturbed over the years, from test pits in 2001 to AS/SVE wells and trenches in 2007.

The GPR/metal detector survey and the accompanying review of historical documents did not reveal any USTs at 77 W. Huron St. as a possible source of the plumes delineated by Matrix in the parking lot. However, Sunoco has contended that there are different sources and has implied that there is no relationship between the Sunoco source and the contamination on the Huron property. In a letter dated May 10, 2012, the NYSDEC indicated that additional investigation and remediation is necessary on the 75-77 Huron property, and directed Hurondel to perform this Geoprobe soil investigation work.

3.0 SUMMARY OF ENVIRONMENTAL CONDITIONS

IEG conducted site visits in 2011 and reviewed available documents (i.e. past Phase I and II ESAs) to assess site conditions. The following environmental conditions were identified during the site visit and from previous documents:

- A 1999 Phase I ESA Report by Maxim for 75-77 W Huron referenced 1925 Sanborn fire insurance map showing 3 gasoline USTs on 77 W Huron parcel. This report did not indicate whether all USTs were removed. No maps were included to show the locations of these USTs.
- The parking lot at 77 and 79 showed evidence of past excavations. Cracks in the asphalt in some areas revealed no fill below.
- There were MWs on the property some of which were in disrepair.

4.0 FIELD INVESTIGATION

4.1 Objectives

The following activities were undertaken as part of this Geoprobe Soil Investigation:

- Review of historical documents.
- Subsurface investigation: A subsurface soil investigation via Geoprobe (direct push method) borings was undertaken to determine the nature of subsurface materials in areas previously not investigated, and verify potential residual contamination in areas previously investigated. The Geoprobe soil sampling was limited to the 77 W. Huron site except for (1) boring which



was located at the northwest corner of the 73 W. Huron building (207 Delaware Ave). No groundwater samples were collected based on field observations.

- Survey: The Geoprobe soil boring locations and existing monitoring wells were surveyed by a licensed land surveyor.

4.2 Sampling and Analysis

IEG sampled subsurface soils at the 77 W. Huron St. property in August 2012. EP&S of Vermont provided a track-mounted Geoprobe for the soil borings. All samples were analyzed by Test America (Amherst, NY). In addition, soil sample location and monitoring wells were surveyed by WM Schutt Associates using a benchmark (Elev. 100') established on the Sunoco site. Field and laboratory analytical data for the soil samples are presented in Tables 1 through 3, and on Figure 3. Photo pages are included in Attachment A. The survey data are included in Table 4 along with sample depths and relative elevations. The survey map and subsurface cross-sections are included as Attachments B and C respectively. Laboratory analytical reports are included in Attachment D.

4.2.1 Geoprobe Soil Samples

Sampling: On Aug 14 and 16, 2012, soil borings using the Geoprobe were completed at sixteen (17) locations on the site (samples GP-1 through GP-17 on Figure 2). Continuous soil samples were collected in four-foot intervals to depths up to 24 feet or refusal, whichever came first. The soil borings were photographed, screened with a PID meter for VOCs, and sampled as appropriate. Table 1 shows a summary of the sampling and analysis along with field observations. The samples were analyzed for STARS VOCs and STARS SVOCs based on a combination of factors - field observations, PID readings and locations. Descriptions of the soil boring samples are included in Table 2. Analytical results for those samples so tested are tabulated in Table 3. Total VOCs and associated sample elevations are shown on Figure 3 along with groundwater elevations from 9/8/11 at monitoring wells in the vicinity.

All samples showed evidence of sand. Silty sand, gravel and ash were also present. The water table, based on the wetness of the subsurface soil, varied between 7' and 11' below ground surface. Most Geoprobe soil borings were located in the southern two-thirds of the site, concentrating on areas where evidence suggested previous locations of USTs or other concerns.

GP-1 was located near the northwest corner of the building at 73 W Huron. GP-2 and GP-3 were located near the north end of the parking lot at 77 W Huron. GP-4 through GP-11 were around the center of the parking lot. GP-12 through GP-17 were located in the south end of the site. All borings were done on paved areas. As shown in Table 2, elevated PID readings were observed in soil samples mostly at depths of 11' or more below ground surface. Single grab soil samples were collected at Geoprobe locations in the northern half of the parking lot. Multiple grab samples (2 to 3 per location at varying depths) were collected for laboratory analysis in the southern half of the lot. The depths of soil samples submitted for laboratory analysis are shown in Table 1.

Analytical Results: Fourteen (14) of the seventeen (17) samples sent to the lab were selected for VOC analysis based on field PID readings. Up to thirteen (13) VOC compounds were found in the samples analyzed. Soil sample locations are shaded in Figure 3 according to the relative levels of total VOCs. GP-14 located in the southern section of the lot near MW-9, posted by far the highest total VOC concentration (857 mg/Kg) at a depth of 13' below ground surface (bgs; relative elevation of 88.5'). At this location, total VOCs were orders of magnitude lower at depths of 11' and 16' bgs. GP-15, near MW-9 and MW-14, had the next highest total VOC concentration (576 mg/Kg) at 13' bgs. GP-16, located in the southern end near MW-6, posted the third highest (315 mg/Kg) at 13' bgs. GP-5, GP-6 and GP-8 near the middle of the lot posted elevated total VOC levels, although these were much lower than the previous three. Total VOCs for the other five samples were between 0.005 and 0.4 mg/Kg.



Four of the 17 lab samples were tested for SVOCs. Only one compound (Naphthalene) was found in the samples analyzed. GS-14 posted the highest level with 10,000 µg/Kg Naphthalene. GP-16 and GP-17 had trace levels. GP-8 was non-detect for SVOCs.

4.3 Data Assessment

VOC Contamination: Elevated PID readings and VOC contamination associated with gasoline was found in the subsurface soil in the southern half of the W. Huron St. parking lot. The contamination was found mostly at depths greater than 11' bgs (elevation less than 90'), and below the groundwater table. According to data from 9/8/11 in Sunoco's August 29, 2012, 2nd Quarter 2012 Site Status Report, groundwater was at elevation 90.84' at MW-6, 90.77' at MW-7, 91.17' at MW-8 and 90.93' at MW-9. The data for 12/1/11, 3/26/12 and 6/25/12 in Sunoco's report indicate higher groundwater levels with slight variations at MW-6 (91.50' – 91.71') and MW-7 (91.44' – 91.64') which are located on the Sunoco side of the southern property boundary with 77 W. Huron (no measurements were taken at MW-8, MW-9 and MW-10 during this data period).

To better understand the extent of contamination, two north-south subsurface cross-sections were developed for the parking lot and are included in Attachment C. The cross-section locations are shown on Figure C-1, and the two cross-sections are shown on Figure C-2. As seen on Figure C-2, soil petroleum contamination is at depths below the groundwater table with the exception of GP-16 (near MW-6) and GP-17 (near MW-7) where the contamination straddled up above the water table into the vadose zone, but was within the range of the variation in the water table.

These findings and results indicate soil contamination to be more directly related to groundwater migration than the presence of a UST source. As indicated in previous reports by GES and Matrix, the regional groundwater flow is from the west to the east across the former Sunoco service station at 181 Delaware and thence across 77 W. Huron. In-situ groundwater remedial activities at the Sunoco site have altered localized groundwater flow beneath the two sites. However, the predominant groundwater flow remains west to east.

Petroleum Source Areas in Parking Lot: The area around MW-8 in the middle section of the parking lot close to the western boundary was suspected of having USTs dating back to the 1920s/30s. Several Geoprobe borings (GP-4 through GP-11) were completed in this area and no USTs were encountered, confirming the findings of the 2011 GPR survey by IEG. Most of this area appears to contain fill from past activities including Testpit sampling, as well the installation of SVE trenches. There does not appear to be any UST source associated with the petroleum contamination in the area around MW-8.

5.0 CONCLUSIONS AND RECOMMENDATIONS

IEG completed a Geoprobe Soil Investigation at the parking lot located at 77 W. Huron Street in Buffalo, NY. The investigation included the following:

- Subsurface investigation consisting of Geoprobe soil borings at 77 and 79 W. Huron.
- Survey and inspection of existing monitoring installations at 77 W Huron.

The northern half of the parking lot at 77 W. Huron St. does not have any petroleum contamination and needs no further action.

The Geoprobe soil investigation, in conjunction with the 2011 GPR/metal detector survey and review of historical documents, did not reveal any USTs at 77 W. Huron that could be the source of the two distinct plumes delineated by Matrix in the southern half of the parking lot. Most significantly:



- GPR anomalies were observed across the parking lot of 77 W. Huron, but all of them were indicative of the disturbance of subsurface geology; none of the GPR profiles matched that of a typical UST. No USTs were discovered during the completion of the Geoprobe soil borings.
- Historically, the southern section of 77 W. Huron has been directly down gradient from 181 Delaware, and also has relatively the most soil and groundwater contamination; the contamination levels can therefore attributed to the source originating at 181 Delaware, and migrating east past MW-6 and MW-7 across the property boundary.
- The groundwater table is at 7.5' to 10' bgs, and soils with high VOCs were generally collected during this Geoprobe investigation at depths greater than 11' bgs or below the groundwater table; the saturated soil contamination is therefore most likely associated with the migration of contaminated groundwater from highly contaminated source areas. Groundwater at MW-6 and MW-7 along the property boundary between the two sites has been at the same high VOC levels as MW-4 and MW-5 in the source areas of the Sunoco site.

In summary, the northern half of the parking lot has no petroleum contamination and requires no further action, while the southern half shows petroleum contamination at levels requiring remedial action. Six of the seventeen Geoprobe soil locations, all in the southern half of the parking lot) had elevated VOC levels. There appears to be no identifiable source of contamination at the 77 W. Huron property, and this investigation revealed the area to have petroleum contamination primarily associated with the historical use of USTs across the property at 181 Delaware.

The presence of VOCs at the levels observed in the southern half of the lot will continue to present environmental concerns at the 77 W. Huron site. This contamination extends from a depth of 8' down to about 20' below ground surface, mostly within the groundwater aquifer. The unsaturated soil layer above the water table appears to be relatively clean. The in-situ groundwater remediation system currently operating at the Sunoco site may be extended to address the deep subsurface contamination at the 77 W. Huron site. Alternately, the contaminated layer of subsurface soil can be excavated and disposed off-site. The associated excavation water (and thereby groundwater) can simultaneously be pumped out, treated and discharged to the sewer with approval from the BSA. This alternate remedial measure would also require efforts to prevent any further migration of contaminated groundwater from the adjacent Sunoco site.











77 W HURON ST., BUFFALO, NY
AERIAL PHOTO – GEOPROBE SOIL SAMPLING








FIGURE 1

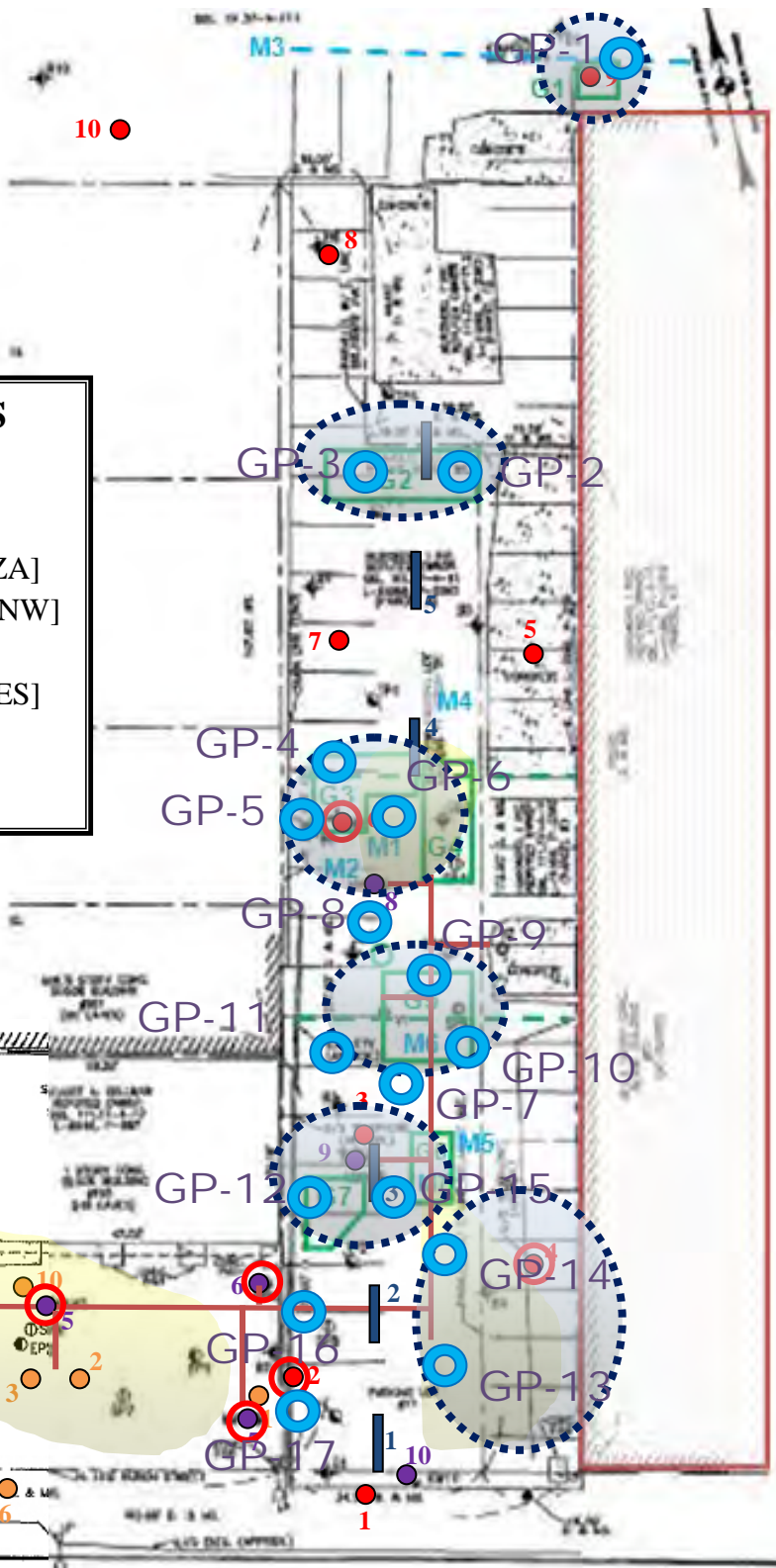
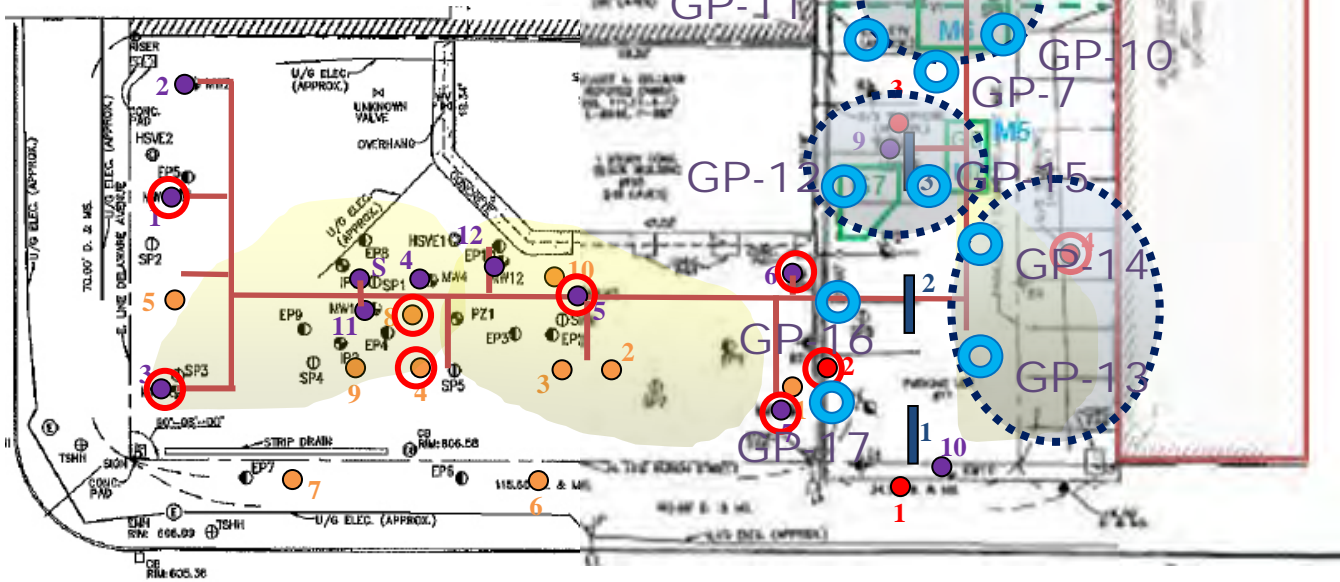


LEGEND

-  GPR Survey Border
-  GPR Survey Number
-  GPR Survey Line
-  Metal Detection Line
-  Metal Detection Number
-  75 W. Huron Building

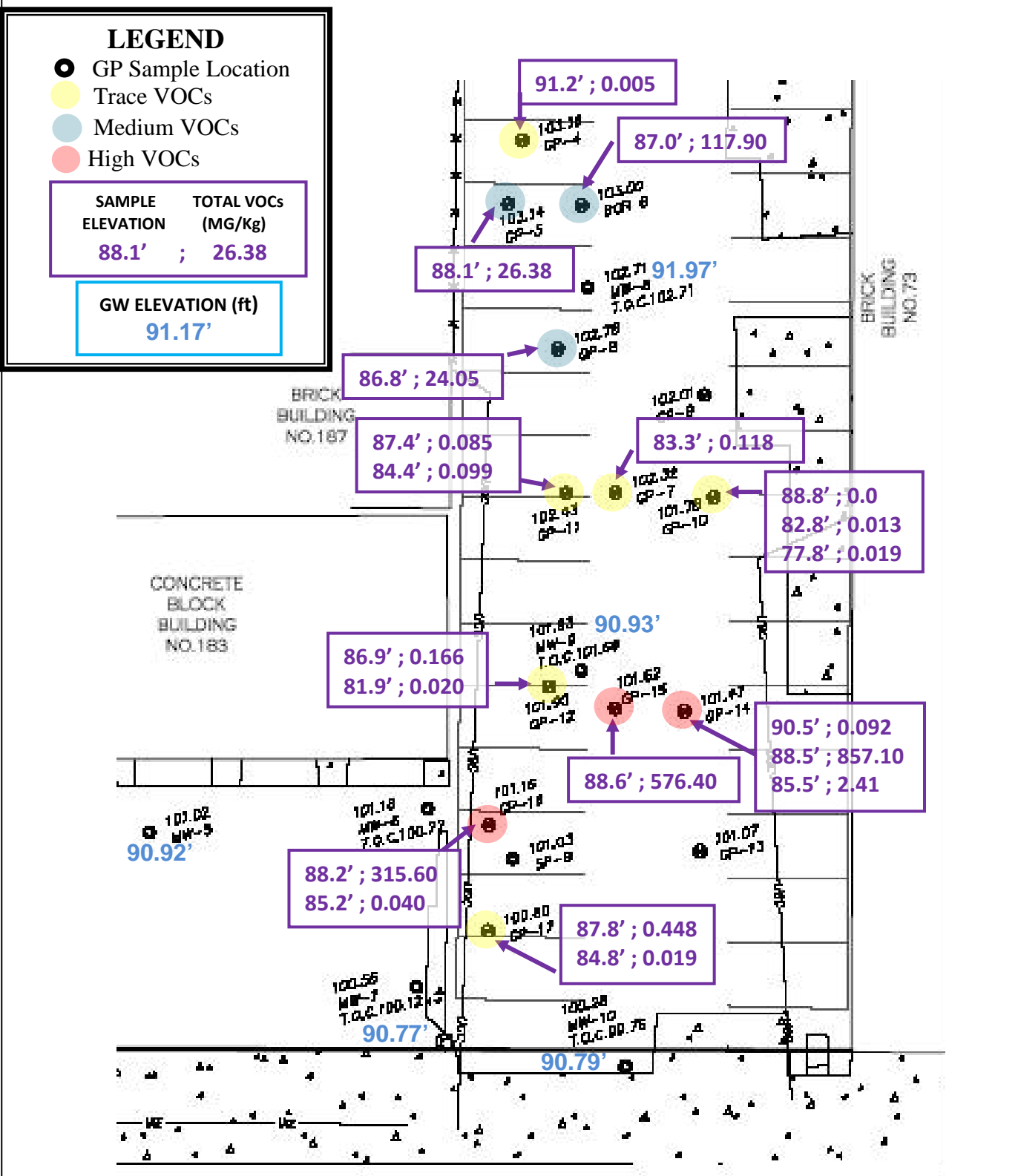
**SAMPLING LOCATIONS
(PREVIOUS SI & RA)**

-  Test Pits [TPs/2001/BES]
-  Geoprobe Borings [B/2003/GZA]
-  Earthprobe Borings [EP/2003/NW]
-  Plume [2011/Matrix]
-  Monitoring Wells [2004-11/GES]
-  GES SVE Lines [2007/GES]
-  Elevated VOCs reported



**77 W HURON ST & 183 DELAWARE AVE
INVESTIGATION / REMEDIATION HISTORY**

FIGURE 2
IEG



Note: Soil samples from 8/14&16/12 by IEG; GW level data from 9/8/11 by Sunoco

77 W HURON STREET SOIL VOC CONCENTRATIONS

FIGURE 3

IEG

TABLE 1

**77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
SUMMARY OF SOIL SAMPLING AND ANALYSIS**

SAMPLE LOCATION	FIELD OBSERVATIONS				LABORATORY SAMPLES	
	PETROLEUM AT (ft bgs)	PID READINGS (ppm range)	WATER AT (ft bgs)	BOEHOLE DEPTH	STARS VOCs	STARS SVOCs
GP-1	none	0	4'	Refusal at 9'	--	--
GP-2	none	0	5', 12'	16'	7	--
GP-3	none	0	11'	16'	13	--
GP-4	none	0	11'	16'	12	--
GP-5	13' - 18'	0 - 1245	11'	20'	15'	--
GP-6	12' - 20'	0 - 2370	11'	20'	16'	--
GP-7	14' - 20'	0 - 24	11'	20'	19'	--
GP-8	15' - 19'	0 - 1297	11'	20'	16'	16'
GP-9	borehole kept collapsing		7'	8'	--	--
GP-10	14' - 19'	0 - 58	10'	24'	13', 19' & 24'	--
GP-11	none	0	10'	20'	15' & 18'	--
GP-12	12' - 18'	10 - 127	8'	20'	15' & 20'	--
GP-13	none	--	--	Refusal at 4'	--	--
GP-14	10' - 18'	0 - 3024	10'	20'	11', 13' & 16'	13', 16'
GP-15	10' - 19'	0 - 3750	9'	20'	13'	--
GP-16	9' - 19'	0 - 3395	8'	20'	13' & 16'	13'
GP-17	8' - 17'	0 - 114	8'	20'	13' & 16'	13'

TABLE 2
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
BOREHOLE SOIL SAMPLE DESCRIPTION

SOIL BORING ID NUMBER	DEPTH INTERVAL (ft)	PID READINGS SOIL (ppm)	SAMPLE AT (ft bgs)	WATER AT (ft bgs)	REMARKS
Background	atmosphere	0		--	Description
GP-1	0-2			4	Concrete, brown sand, red brick
	2-4				Fill, brown sand and gravel
	4-6				Low recovery, fill, sand, gravel, brick, wood
	6-8				Low recovery
	8-10				Fill, brick, sand, concrete, refusal at 9'
	10-12				
	12-14				
	14-16				
	16-18				
	18-20				
GP-2	0-2			5	Asphalt, concrete, black sand and gravel
	2-4				Grey ash, brown sand
	4-6				Tan sandy silt, grey ash
	6-8		7		Grey sand
	8-10			12	Dull grey sand
	10-12				Dull grey sand
	12-14				Brown sand
	14-16				Brown sand
	16-18				
	18-20				
GP-3	0-2			11	Asphalt, fill, black, sand / gravel
	2-4				Tan silty sand
	4-6				Tan silty sand, dull grey sand
	6-8				Dull grey sand
	8-10				Dull grey sand
	10-12				Dull grey sand
	12-14		13		Dull grey sand
	14-16				Dull grey sand
	16-18				
	18-20				
	0-2				Asphalt, fill, black gravel sand, tan silty sand

TABLE 2
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
BOREHOLE SOIL SAMPLE DESCRIPTION

SOIL BORING ID NUMBER	DEPTH INTERVAL (ft)	PID READINGS SOIL (ppm)	SAMPLE AT (ft bgs)	WATER AT (ft bgs)	REMARKS
GP-4	2-4			11	Tan silty sand, brown silty sand, brick
	4-6				Tan silty sand, brown silty sand
	6-8				Brown silty sand, dull grey sand
	8-10				Dull grey sand
	10-12		12		Dull grey sand
	12-14				Dull grey sand, small dark grey band
	14-16				Dull grey sand
	16-18				
	18-20				
GP-5	0-2			11	Asphalt, black sand / gravel, grey ash
	2-4				Tan silty sand
	4-6				Brown silty sand
	6-8				Dull grey sand
	8-10				Dull grey sand
	10-12				Dull grey sand
	12-14	35			Product at 14', dull grey sand
	14-16	1245 - 361	15		Black sand with product
	16-18	600 - 0			Black sand with product
	18-20	11 - 0			Dull brown sand
GP-6	0-2			11	Asphalt, black sand gravel fill, grey ash
	2-4				Fill, grey ash, red brick
	4-6				Tan silty sand
	6-8				Brown silty sand, brown sand
	8-10				Brown sand, dull grey sand
	10-12				Dull grey sand
	12-14	27 - 503			Brown sand
	14-16	2370 - 2018	16		Dull grey sand, product at 15'
	16-18	1028 - 61			Black sand with product
	18-20	0 - 19			Brown sand, grey tint

TABLE 2
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
BOREHOLE SOIL SAMPLE DESCRIPTION

SOIL BORING ID NUMBER	DEPTH INTERVAL (ft)	PID READINGS SOIL (ppm)	SAMPLE AT (ft bgs)	WATER AT (ft bgs)	REMARKS
GP-7	0-2			11	Asphalt, gravel sand, fill, grey ash
	2-4				Fill, grey ash, red brick, brown silty sand
	4-6				Brown silty sand
	6-8				Brown silty sand
	8-10				Brown silty sand
	10-12				Brown sand
	12-14				Brown sand
	14-16	0 - 4			Black sand with product at 14'
	16-18	6 - 4			Brown sand, black sand at 17'
	18-20	24 - 3	19		Black sand
GP-8	0-2			11	Asphalt, fill sand gravel, brown silty clay
	2-4				Brown silty clay
	4-6				Fill, grey ash, sand
	6-8				Brown sandy gravel
	8-10				Brown sandy gravel
	10-12				Brown sand
	12-14				Brown sand
	14-16	505 - 1297	16		Black sand with product
	16-18	973 - 112			Black and tan sand with product
	18-20	60 - 0			Black to brown sand
GP-9	0-2			7	Asphalt, sand gravel fill, grey ash
	2-4				Grey ash, tan silty sand
	4-6				Tan silty sand
	6-8				Dull grey sand
	8-10				
	10-12				
	12-14				
	14-16				
	16-18				
	18-20				

TABLE 2
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
BOREHOLE SOIL SAMPLE DESCRIPTION

SOIL BORING ID NUMBER	DEPTH INTERVAL (ft)	PID READINGS SOIL (ppm)	SAMPLE AT (ft bgs)	WATER AT (ft bgs)	REMARKS
GP-10	0-2			10	Asphalt, brown sand / gravel fill
	2-4				Low recovery, fill
	4-6				Brown silty sand / gravel
	6-8				Brown silty sand, brown sand
	8-10				Tan sand, dull brown sand
	10-12				Dull brown sand
	12-14	0	13		Brown sand
	14-16	11			Grey sand, black sand, product at 14'
	16-18				Black sand
	18-20	58 - 0	19		Grey sand, brown 1" tip
	20-22				Grey sand
22-24		24	Brown sand		
GP-11	0-2			10	Asphalt, brown soil, grey sand / gravel fill
	2-4				Tan silty sand with gravel
	4-6				Brown silty sand with gravel
	6-8				Brown silty sand with fill ash and gravel
	8-10				Tan sand
	10-12				Dull brown sand
	12-14	0			Brown sand
	14-16	0	15		Grey sand, black sand, product at 14'
	16-18	0	18		Black sand
18-20	0		Grey sand, refusal at 19'		
GP-12	0-2			8	Asphalt, soil, grey sand / gravel
	2-4				Tan silty sand
	4-6				Tan silty sand and gravel
	6-8				Brown silty sand
	8-10				Brown sand
	10-12	0			Brown sand, grey sand, product at 13'
	12-14	4 - 127			Grey sand, brown sand, grey sand
	14-16	122 - 10	15		Grey sand
	16-18	27			Grey sand
	18-20	0	20		Grey sand
	0-2				Asphalt, fill , soil, sand / gravel, brown silty sand

TABLE 2
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
BOREHOLE SOIL SAMPLE DESCRIPTION

SOIL BORING ID NUMBER	DEPTH INTERVAL (ft)	PID READINGS SOIL (ppm)	SAMPLE AT (ft bgs)	WATER AT (ft bgs)	REMARKS
GP-13	2-4				Brown sand
	4-6				
	6-8				
	8-10				
	10-12				
	12-14				
	14-16				
	16-18				
	18-20				
GP-14	0-2				Asphalt, brown soil, grey sand / gravel
	2-4				Brown silty sand with gravel
	4-6				Brown silty sand with gravel
	6-8				Brown sand
	8-10				Brown sand with brick
	10-12	323 - 2800	11	10	Brown sand, black sand at 11', brown sand
	12-14	3024	13		Brown sand
	14-16	353 - 0	16		Grey sand, black sand, product at 14'
	16-18	2824 - 568			Black sand
	18-20	0			Grey sand, brown sand
GP-15	0-2				Asphalt, grey sand, gravel
	2-4				Fill, silty sand, glass, gravel
	4-6				Brown silty sand, brick, gravel
	6-8				Brown silty sand, gravel, brown sand
	8-10	0			Brown sand
	10-12	61		9	Brown sand, grey sand, product at 11'
	12-14	1465 - 3750	13		Brown sand, grey sand, brown sand
	14-16	3221 - 255			Brown sand, black sand
	16-18	2811 - 2558			Grey sand
	18-20	15 - 0			Brown sand

TABLE 2
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
BOREHOLE SOIL SAMPLE DESCRIPTION

SOIL BORING ID NUMBER	DEPTH INTERVAL (ft)	PID READINGS SOIL (ppm)	SAMPLE AT (ft bgs)	WATER AT (ft bgs)	REMARKS
GP-16	0-2			8	Asphalt, grey sand gravel, tan silty sand
	2-4				Tan silty sand, brown silty sand
	4-6				Brown silty sand
	6-8				Brown silty sand, yellow sand, brown sand
	8-10	30			Brown sand, grey sand, product at 10'
	10-12	2921 - 3307			Grey sand, black sand
	12-14	3395 - 3252	13		Black sand
	14-16	2942 - 226	16		Grey sand, dull brown
	16-18	142 - 2624			Grey sand
	18-20	86 - 0			Brown sand
GP-17	0-2			8	Asphalt, fill, grey sand / gravel, tan silty sand
	2-4				Tan silty sand, brown silty sand
	4-6				Brown silty sand
	6-8				Yellow sand, brown sand
	8-10	3 - 8			Brown sand, grey sand, product at 10'
	10-12	22			Grey sand
	12-14	114 - 49	13		Black sand, grey sand
	14-16	0 - 6	16		Grey sand
	16-18	0			Grey sand
	18-20	0			Grey sand, brown sand, refusal at 19'

TABLE 3
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
ANALYTICAL RESULTS FOR SOIL SAMPLES

SAMPLE ID/ PARAMETER	SCOs - Gasoline	GP-1	GP-2- 7'	GP-3- 13'	GP-4- 12'	GP-5- 15'	GP-6- 16'	GP-7- 19'	GP-8- 16'	GP-9	GP-10- 13'	GP-10- 19'	GP-10- 24'		
	CP51-SOIL														
SAMPLING DEPTH (VOCs)			7	13	12	15	16	19	16		13	19	24		
SAMPLING DEPTH (SVOCs)									16						
Percent Solids (%)			80.8	87.3	84.3	85.1	84.5	87.2	84		83.5	87.8	82.5		
VOLATILE ORGANICS (ug/Kg)															
1,2,4-Trimethylbenzene	3,600	NA	2.0 JB	2.0 JB	1.4 JB		39000	87	2400	NA		4.0 J	3.0 JB		
1,3,5-Trimethylbenzene	8,400						1200								
p-Isopropyltoluene	10,000					4800	5700		2900					1.7 J	
Benzene	60														
Ethylbenzene	1,000			0.60 J	0.61 J				0.67 J						
Isopropylbenzene	2,300						1000 J	1.8 J	55 J						
m-Xylene & p-Xylene	(in total)			2.6 J	2.6 J	1.7 J			1.1 J					1.2 J	1.9 JB
Naphthalene	12,000								16		120			3.1 J	
n-Butylbenzene	12,000						15000	24000			10000				5.7 J
n-Propylbenzene	3,900						280	40000	10		5200			3.8 J	3.3 J
o-Xylene	(in total)														
sec-Butylbenzene	11,000						6300	7000			3300				1.9 J
tert- Butylbenzene	5,900										77 J				
Toluene	700			1.4 J	1.1 J										
Total Xylenes	260			2.6 J	2.6 J	1.7 J			1.1 J					1.2 J	1.9 JB
TOTAL BTEX				5	4	2	0	0	2		0		0	1	2
TOTAL VOCs	1,000		9	9	5	26,380	117,900	118	24,052		0	13	19		
SEMIVOLATILE ORGANICS (ug/Kg)															
Naphthalene	--	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA		

- Notes: 1. ND - Not Detected; NA = Not Analyzed
2. Only detected volatile and semivolatile compounds are listed
3. Values exceeding CP51 Soil SCOs for gasoline compounds are highlighted in yellow

TABLE 3
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
ANALYTICAL RESULTS FOR SOIL SAMPLES

SAMPLE ID/ PARAMETER	SCOs - Gasoline CP51-SOIL	GP-11- 15'	GP-11- 18'	GP-12- 15'	GP-12- 20'	GP-13	GP-14- 11'	GP-14- 13'	GP-14- 16'	GP-15- 13'	GP-16- 13'	GP-16- 16'	GP-17- 13'	GP-17- 16'	
SAMPLING DEPTH (VOCs)		15	18	15	20		11	13	16	13	13	16	13	16	
SAMPLING DEPTH (SVOCs)								13	16		13		13-Jan		
Percent Solids (%)		84.7	84.7	87	85.9		82.4	84.6	82.1	84.6	84.8	84.2	84.4	86.8	
VOLATILE ORGANICS (ug/Kg)															
1,2,4-Trimethylbenzene	3,600	25 B	69 B	29 B	3.6 JB	NA	26 J	290000	1100	220000	69000	4.8 J	110	2.0 J	
1,3,5-Trimethylbenzene	8,400			6.4					81000	300	69000	21000		26	2.9 J
p-Isopropyltoluene	10,000	7.1	1.4 J	1.2 J				31	2200		3600	1600		1.9 J	
Benzene	60														
Ethylbenzene	1,000								26000		6700	19000		12	0.71 J
Isopropylbenzene	2,300		1.2 J					17 J	8700		11000	3500		2.4 J	
m-Xylene & p-Xylene	(in total)	1.6 JB	2.3 JB	3.8 JB	3.6 JB				140000	100 J	74000	69000		55	1.8 J
Naphthalene	12,000		9.9 B	110 B	7.0 B				49000	530	31000	11000	35	140	9.6
n-Butylbenzene	12,000	21	5.3 J	4.9 J	1.4 J				22000	160	23000	7800	0.54 J	5.7 J	
n-Propylbenzene	3,900	20	7.5	3.4 J	1.0 J			18 J	39000	120	29000	9900		10	
o-Xylene	(in total)			1.5 J					26000		9800	11000		13	
sec-Butylbenzene	11,000	8.5							3200		4300	1600			
tert- Butylbenzene	5,900														
Toluene	700											3200		3.7 J	
Total Xylenes	260	1.6 JB	2.3 JB	5.3 JB	3.6 JB				170000	100 J	95000	88000		68	1.8 J
TOTAL BTEX		2	2	5	4			0	196,000	100	101,700	110,200	0	84	3
TOTAL VOCs	1,000	85	99	166	20		92	857,100	2,410	576,400	315,600	40	448	19	
SEMIVOLATILE ORGANICS (ug/Kg)															
Naphthalene	--	NA	NA	NA	NA	NA	NA	NA	10000	ND	NA	530 J	NA	66 J	NA

- Notes: 1. ND - Not Detected; NA = Not Analyzed
2. Only detected volatile and semivolatile compounds are listed
3. Values exceeding CP51 Soil SCOs for gasoline compounds are highlighted in yellow

TABLE 4
77 W. HURON ST. - GEOPROBE SOIL INVESTIGATION
SOIL AND GW WELL SURVEY DATA

GEOPROBE SOIL SAMPLES - September 2012							
Sample ID	Northing	Easting	Ground Elevation	Sample Depth	Sample Elevation	Observed Water Depth	Water Elevation
GP-1	1,053,093.263	1,069,815.563	104.24			4	100.24
GP-2	1,053,018.765	1,069,776.414	103.43	2	101.43	12	91.43
GP-3	1,053,026.107	1,069,761.632	103.67	13	90.67	11	92.67
GP-4	1,052,976.571	1,069,740.860	103.16	12	91.16	11	92.16
GP-5	1,052,968.952	1,069,737.153	103.14	15	88.14	11	92.14
GP-6	1,052,966.565	1,069,746.411	103.00	16	87.00	11	92.00
GP-7	1,052,929.332	1,069,742.188	102.32	19	83.32	11	91.32
GP-8	1,052,949.188	1,069,739.182	102.78	16	86.78	11	91.78
GP-9	1,052,939.025	1,069,756.352	102.01			7	95.01
GP-10	1,052,925.841	1,069,754.436	101.76	13	88.76	10	91.76
				19	82.76		
				24	77.76		
GP-11	1,052,930.750	1,069,735.943	102.43	15	87.43	10	92.43
				18	84.43		
GP-12	1,052,906.854	1,069,728.037	101.90	15	86.90	8	93.90
				20	81.90		
GP-13	1,052,881.645	1,069,742.212	101.07				
GP-14	1,052,899.706	1,069,744.406	101.47	11	90.47	10	91.47
				13	88.47		
				16	85.47		
GP-15	1,052,902.153	1,069,735.753	101.62	13	88.62	9	92.62
GP-16	1,052,891.208	1,069,716.331	101.16	13	88.16	8	93.16
				16	85.16		
GP-17	1,052,877.864	1,069,713.078	100.80	13	87.80	8	92.80
				16	84.80		

MONITORING WELLS LOCATIONS						
Sample ID	Northing	Easting	Ground Elevation by WW Shutt	Casing Elev. (by Sunoco)	Casing Elev. (by WW Shutt)	GW Elev. (9/8/11)
PZ-1	1,052,908.048	1,069,648.864	100.85	--	--	--
MW-1R	1,052,931.171	1,069,611.608	100.87	100.18	--	91.07
MW-2	1052949.028	1069617.23	100.87	100.74	--	91.13
MW-3	1,052,899.425	1,069,602.423	100.07	99.39	--	90.93
MW-4	1,052,910.275	1,069,648.637	100.90	99.45	--	90.88
MW-5	1,052,900.357	1,069,673.264	101.02	100.32	--	90.92
MW-6	1,052,895.004	1,069,709.080	101.18	100.69	100.77	90.84
MW-7	1,052,872.901	1,069,702.396	100.55	99.96	100.12	90.77
SP-8	1,052,886.187	1,069,718.343	101.03	--	--	--
MW-8	1,052,956.106	1,069,744.755	102.71	101.51	102.71	91.17
MW-9	1,052,907.920	1,069,732.519	101.83	100.84	101.68	90.93
MW-10	1,052,856.687	1,069,726.405	100.28	98.87	99.76	90.79
MW-11	1,052,913.276	1,069,634.892	100.89	99.85	--	90.93
MW-12	1,052,907.885	1,069,661.261	101.10	100.66	--	91.85

**77 W. HURON ST.
GEOPROBE SOIL INVESTIGATION**

**ATTACHMENT A
PHOTO PAGES**

77 W HURON STREET, BUFFALO, NEW YORK
SOIL SAMPLING PHOTOS – AUGUST 2012
PAGE 1 OF 4



Underground utilities were marked on the property before the start of soil sampling work



Environmental Products & Services, Inc (EP&S) mobilizes for soil sampling



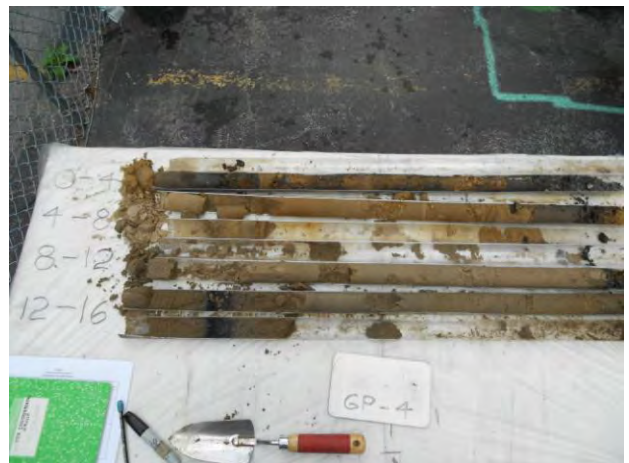
Soil boring GP-1 (4' increments)



Soil boring GP-2 (4' increments)



Soil boring GP-3 (4' increments)



Soil boring GP-4 (4' increments)

77 W HURON STREET, BUFFALO, NEW YORK
SOIL SAMPLING PHOTOS – AUGUST 2012
PAGE 2 OF 4



Soil boring GP-5 is located on the west side of the parking lot near Building #3



Soil boring GP-5 (4' increments)



Soil boring GP-6 is located on the west side of the parking lot near Building #3



Soil boring GP-6 (4' increments)



Soil boring GP-7 is located on the west side of the parking lot near Building #2



Soil boring GP-7 (4' increments)

77 W HURON STREET, BUFFALO, NEW YORK
SOIL SAMPLING PHOTOS – AUGUST 2012
PAGE 3 OF 4



Soil boring GP-8 (4' increments)



Soil boring GP-9 (4' increments)



Soil boring GP-10 (4' increments)



Soil boring GP-11 (4' increments)



Soil boring GP-12 (4' increments)



Soil boring GP-13 (4' increments)

77 W HURON STREET, BUFFALO, NEW YORK
SOIL SAMPLING PHOTOS – AUGUST 2012
PAGE 4 OF 4



Soil boring GP-17 is located on the west side of the parking lot near W Huron St



Soil boring GP-17 (4' increments)

**77 W. HURON ST.
GEOPROBE SOIL INVESTIGATION**

**ATTACHMENT B
SOIL SAMPLE & WELL SURVEY**

77 HURON STREET GEOPROBE SOIL SAMPLING

104.24
GP-1

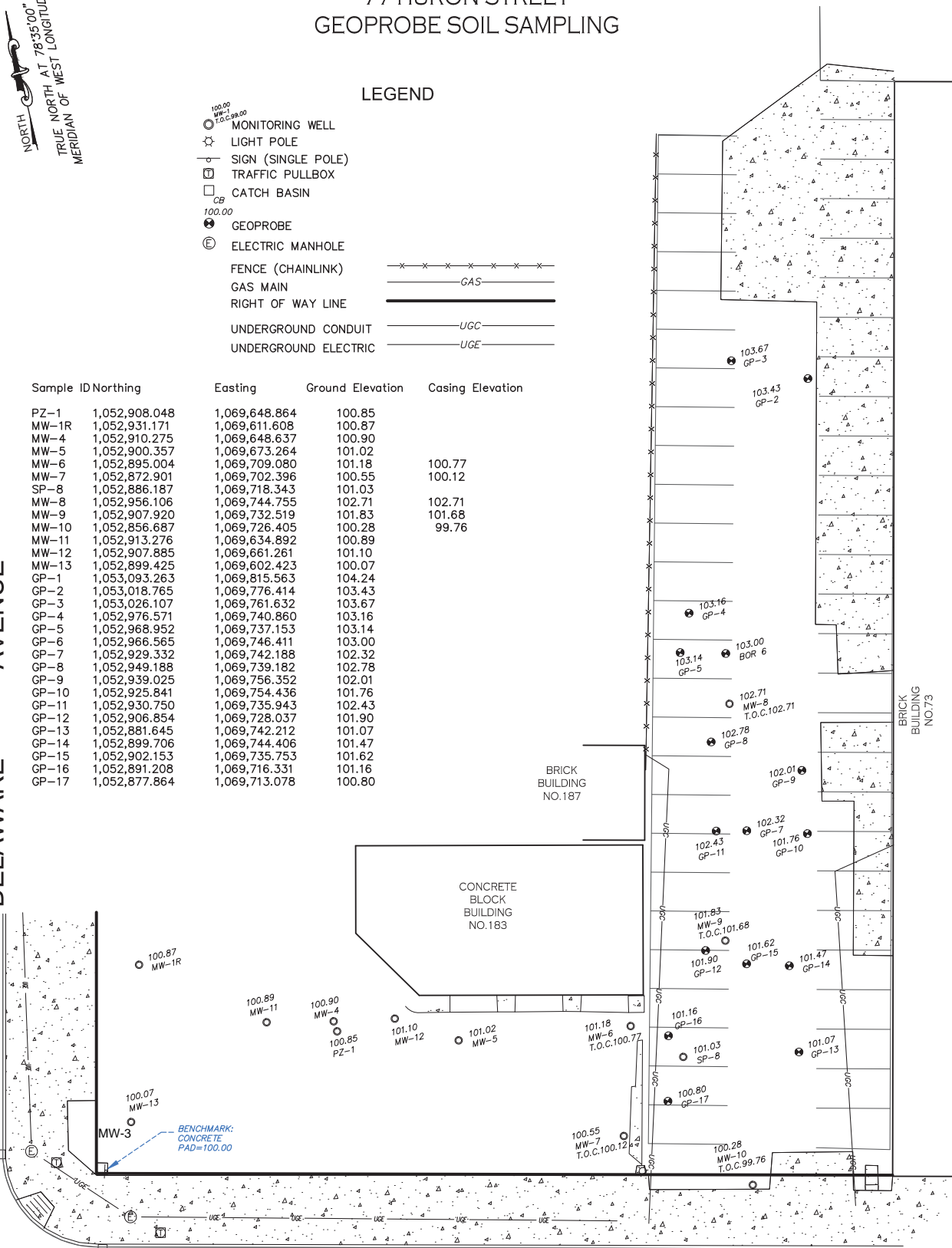
NORTH
TRUE NORTH AT 78°35'00"
MERIDIAN OF WEST LONGITUDE

LEGEND

- 100.00
MW-1
T.O.C. 99.00
MONITORING WELL
- ☆ LIGHT POLE
- SIGN (SINGLE POLE)
- TRAFFIC PULLBOX
- CATCH BASIN
- CB
- 100.00
GEOPROBE
- ⊙ ELECTRIC MANHOLE
- x — x — x — x — x — x —
FENCE (CHAINLINK)
- GAS —
GAS MAIN
- RIGHT OF WAY LINE
- UGC —
UNDERGROUND CONDUIT
- UGE —
UNDERGROUND ELECTRIC

Sample ID	Northing	Easting	Ground Elevation	Casing Elevation
PZ-1	1,052,908.048	1,069,648.864	100.85	
MW-1R	1,052,931.171	1,069,611.608	100.87	
MW-4	1,052,910.275	1,069,648.637	100.90	
MW-5	1,052,900.357	1,069,673.284	101.02	
MW-6	1,052,895.004	1,069,709.080	101.18	100.77
MW-7	1,052,872.901	1,069,702.396	100.55	100.12
SP-8	1,052,886.187	1,069,718.343	101.03	
MW-8	1,052,956.106	1,069,744.755	102.71	102.71
MW-9	1,052,907.920	1,069,732.519	101.83	101.68
MW-10	1,052,856.687	1,069,726.405	100.28	99.76
MW-11	1,052,913.276	1,069,634.892	100.89	
MW-12	1,052,907.885	1,069,661.261	101.10	
MW-13	1,052,899.425	1,069,602.423	100.07	
GP-1	1,053,093.263	1,069,815.563	104.24	
GP-2	1,053,018.765	1,069,776.414	103.43	
GP-3	1,053,026.107	1,069,761.632	103.67	
GP-4	1,052,976.571	1,069,740.860	103.16	
GP-5	1,052,968.952	1,069,737.153	103.14	
GP-6	1,052,966.565	1,069,746.411	103.00	
GP-7	1,052,929.332	1,069,742.188	102.32	
GP-8	1,052,949.188	1,069,739.182	102.78	
GP-9	1,052,939.025	1,069,756.352	102.01	
GP-10	1,052,925.841	1,069,754.436	101.76	
GP-11	1,052,930.750	1,069,735.943	102.43	
GP-12	1,052,906.854	1,069,728.037	101.90	
GP-13	1,052,881.645	1,069,742.212	101.07	
GP-14	1,052,899.706	1,069,744.406	101.47	
GP-15	1,052,902.153	1,069,735.753	101.62	
GP-16	1,052,891.208	1,069,716.331	101.16	
GP-17	1,052,877.864	1,069,713.078	100.80	

DELAWARE AVENUE

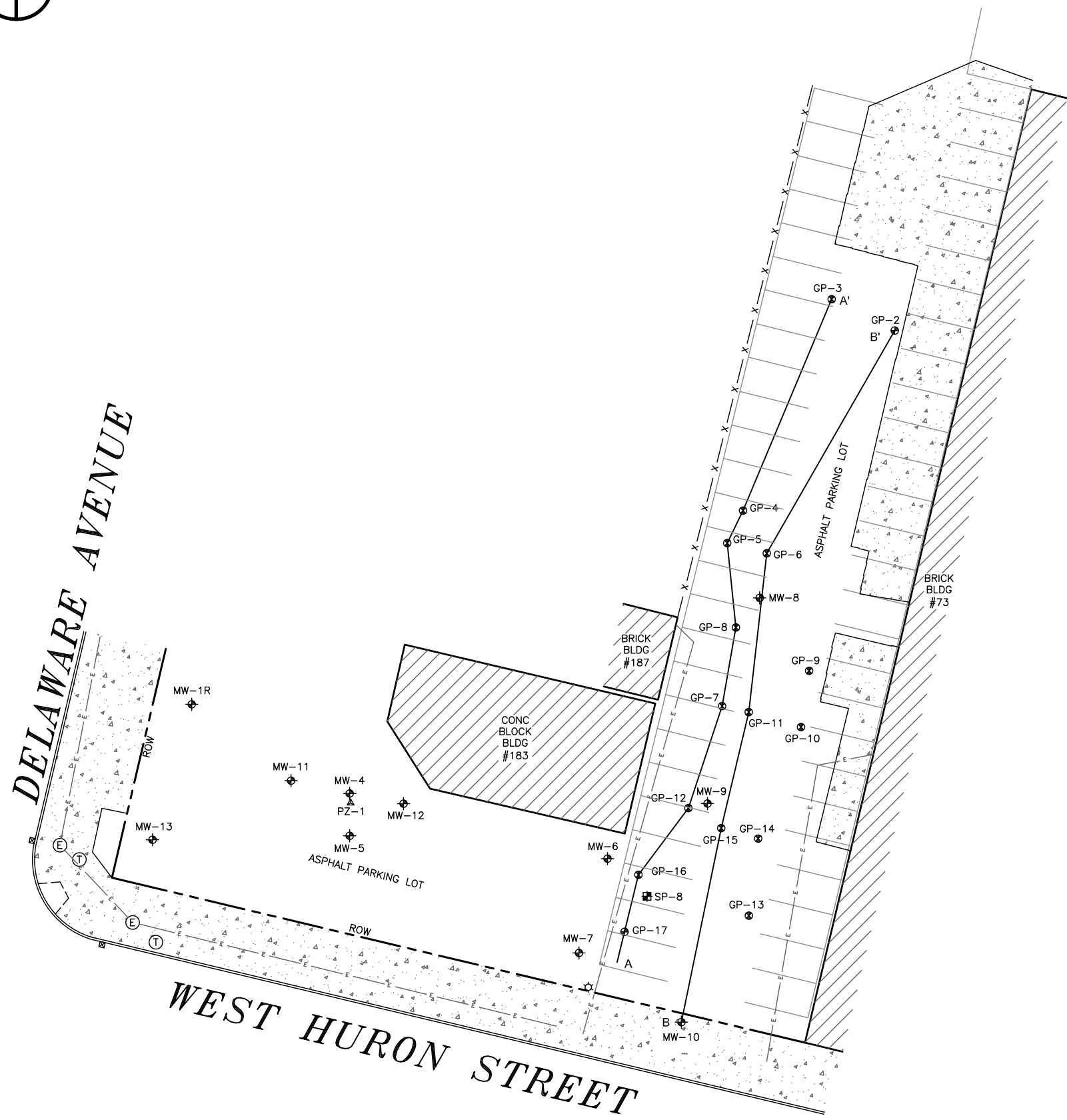


WEST HURON STREET

PART OF LOT: INNER LOT(S) 128 & 129		SECT:	TWP:	RGE:
MAP COVER:		SUB LOT:		BLK:
LOCATED IN: CITY OF BUFFALO, COUNTY OF ERIE, STATE OF NEW YORK				
DATE	DRAWING REVISIONS			
<div style="border: 2px solid black; padding: 5px; display: inline-block;"> WM SCHUTT ASSOCIATES </div>				
37 CENTRAL AVE. LANCASTER, NY 14086-2143 PH. 716-683-5961 FAX 716-683-0169 WWW.WMSCHUTT.COM				
WARNING: UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. © COPYRIGHT 2012 WM. SCHUTT & ASSOCIATES				
SCALE: 1"=30'	DATE: 08/24/2012	SURVEY FILE: B/12147-01		

**77 W. HURON ST.
GEOPROBE SOIL INVESTIGATION**

**ATTACHMENT C
SUBSURFACE CROSS-SECTIONS**



Sample ID	Northing	Easting	Ground Elevation	Casing Elevation
PZ-1	1,052,908.048	1,069,648.864	100.85	
MW-1R	1,052,931.171	1,069,611.608	100.87	
MW-4	1,052,910.275	1,069,648.637	100.90	
MW-5	1,052,900.357	1,069,673.264	101.02	
MW-6	1,052,895.004	1,069,709.080	101.18	100.77
MW-7	1,052,872.901	1,069,702.396	100.55	100.12
SP-8	1,052,886.187	1,069,718.343	101.03	
MW-8	1,052,956.106	1,069,744.755	102.71	102.71
MW-9	1,052,907.920	1,069,732.519	101.83	101.68
MW-10	1,052,856.687	1,069,726.405	100.28	99.76
MW-11	1,052,913.276	1,069,634.892	100.89	
MW-12	1,052,907.885	1,069,661.261	101.10	
MW-13	1,052,899.425	1,069,602.423	100.07	
GP-1	1,053,093.263	1,069,815.563	104.24	
GP-2	1,053,018.765	1,069,776.414	103.43	
GP-3	1,053,026.107	1,069,761.632	103.67	
GP-4	1,052,976.571	1,069,740.860	103.16	
GP-5	1,052,968.952	1,069,737.153	103.14	
GP-6	1,052,966.565	1,069,746.411	103.00	
GP-7	1,052,929.332	1,069,742.188	102.32	
GP-8	1,052,949.188	1,069,739.182	102.78	
GP-9	1,052,939.025	1,069,756.352	102.01	
GP-10	1,052,925.841	1,069,754.436	101.76	
GP-11	1,052,930.750	1,069,735.943	102.43	
GP-12	1,052,906.854	1,069,728.037	101.90	
GP-13	1,052,881.645	1,069,742.212	101.07	
GP-14	1,052,899.706	1,069,744.406	101.47	
GP-15	1,052,902.153	1,069,735.753	101.82	
GP-16	1,052,891.208	1,069,716.331	101.16	
GP-17	1,052,877.864	1,069,713.078	100.80	

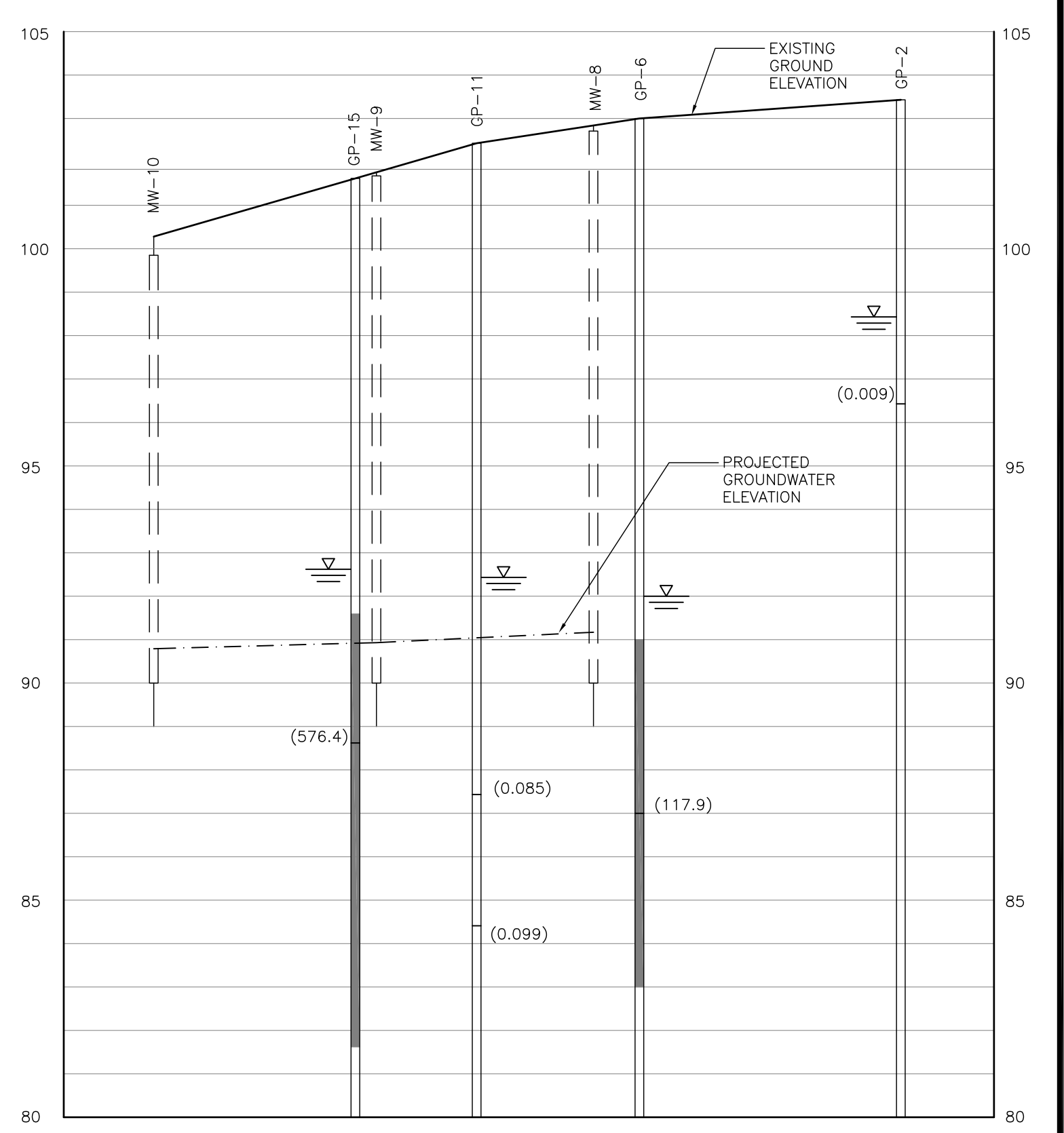
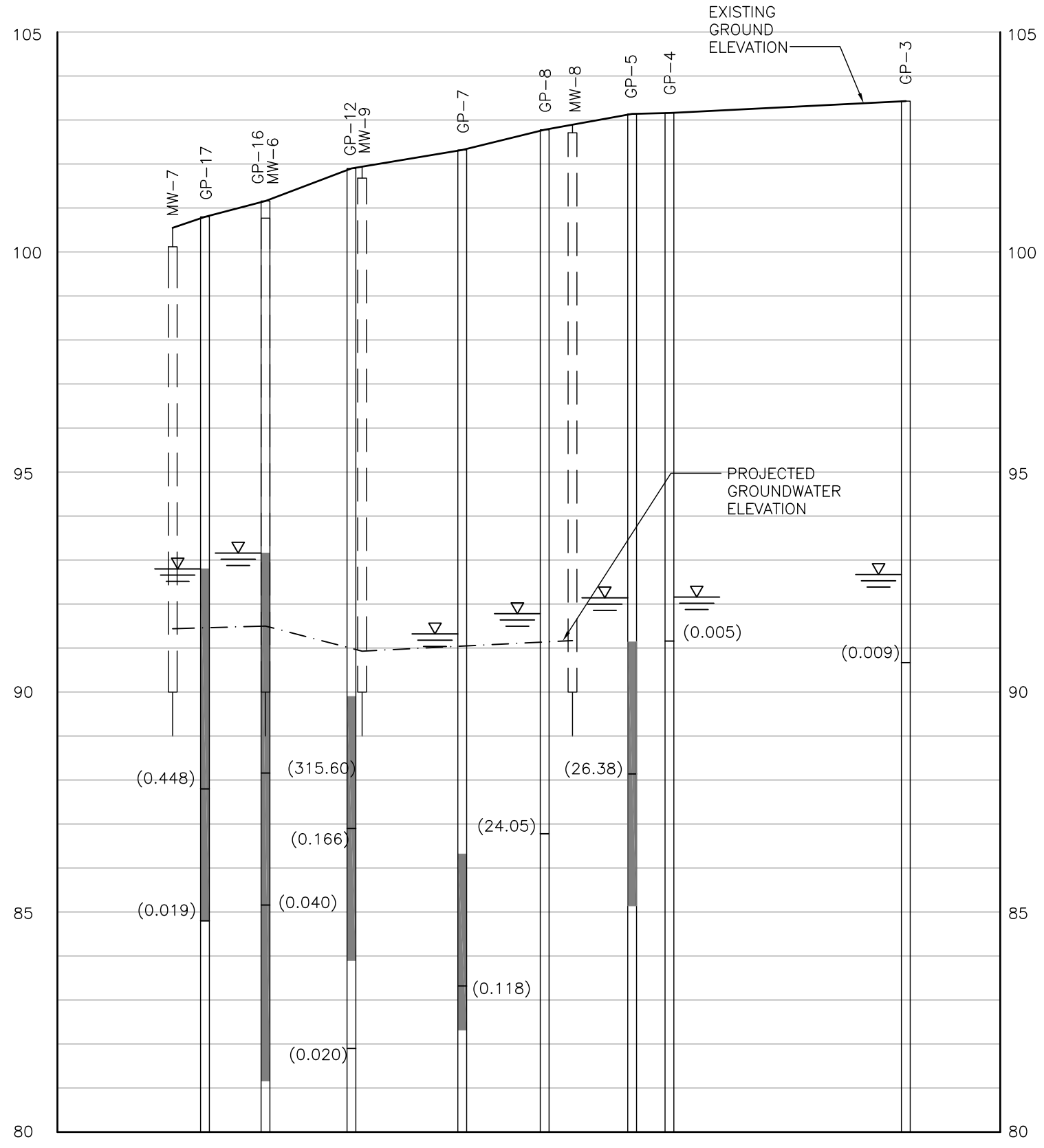


LEGEND:

E	UNDERGROUND ELECTRIC	MONITORING WELL
	CONCRETE	GEOPROBE/SOIL BORING
	BUILDING	PIEZOMETER

**77 HURON STREET
BUFFALO, NEW YORK**

**ATTACHMENT C
FIGURE 1**



LEGEND:		GP	GEOPROBE/SOIL BORING
	GROUNDWATER	MW	MONITORING WELL
	SOIL PETROLEUM CONTAMINATION		WATER AT FT BGS
		(24.05)	TOTAL VOCs

**77 HURON STREET
 BUFFALO, NEW YORK**

**ATTACHMENT C
 FIGURE 2**

**77 W. HURON ST.
GEOPROBE SOIL INVESTIGATION**

**ATTACHMENT D
LABORATORY ANALYTICAL REPORTS**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

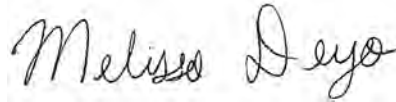
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-23878-1
Client Project/Site: Stars Analysis

For:
Iyer Environmental Group, LLC
44 Rolling Hills Drive
Orchard Park, New York 14127

Attn: Dr. Dharmarajan R Iyer



Authorized for release by:
8/27/2012 1:05:08 PM

Melissa Deyo
Project Manager I
melissa.deyo@testamericainc.com

LINKS

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results through
TotalAccess

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Certification Summary	16
Method Summary	17
Sample Summary	18
Chain of Custody	19
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Definitions/Glossary

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Job ID: 480-23878-1

Laboratory: TestAmerica Buffalo

Narrative

**Job Narrative
480-23878-1**

Receipt

The samples were received on 8/14/2012 4:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 21.2° C.

GC/MS VOA

Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: GP-5-15 (480-23878-4) and GP-6-16 (480-23878-5). Elevated reporting limits (RLs) are provided.

Method 8260B: One surrogate recovery for the following sample was outside control limits: GP-5-15 (480-23878-4). Evidence of matrix interference was present; therefore, re-extraction and/or re-analysis was not performed.

Method 8260B: The method blank for batch 77184 contained 1,2,4-Trimethylbenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.



Detection Summary

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Client Sample ID: GP-2-7

Lab Sample ID: 480-23878-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2.0	J B	5.6	1.1	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	0.60	J	5.6	0.39	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	2.6	J	11	0.95	ug/Kg	1	☼	8260B	Total/NA
Toluene	1.4	J	5.6	0.43	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	2.6	J	11	0.95	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-3-13

Lab Sample ID: 480-23878-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2.0	J B	5.6	1.1	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	0.61	J	5.6	0.39	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	2.6	J	11	0.94	ug/Kg	1	☼	8260B	Total/NA
Toluene	1.1	J	5.6	0.42	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	2.6	J	11	0.94	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-4-12

Lab Sample ID: 480-23878-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1.4	J B	5.1	0.97	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	1.7	J	10	0.85	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	1.7	J	10	0.85	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-5-15

Lab Sample ID: 480-23878-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Isopropyltoluene	4800		230	78	ug/Kg	2	☼	8260B	Total/NA
n-Butylbenzene	15000		230	68	ug/Kg	2	☼	8260B	Total/NA
N-Propylbenzene	280		230	61	ug/Kg	2	☼	8260B	Total/NA
sec-Butylbenzene	6300		230	86	ug/Kg	2	☼	8260B	Total/NA

Client Sample ID: GP-6-16

Lab Sample ID: 480-23878-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	39000		1200	330	ug/Kg	10	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	1200		1200	360	ug/Kg	10	☼	8260B	Total/NA
4-Isopropyltoluene	5700		1200	400	ug/Kg	10	☼	8260B	Total/NA
Isopropylbenzene	1000	J	1200	180	ug/Kg	10	☼	8260B	Total/NA
n-Butylbenzene	24000		1200	350	ug/Kg	10	☼	8260B	Total/NA
N-Propylbenzene	40000		1200	310	ug/Kg	10	☼	8260B	Total/NA
sec-Butylbenzene	7000		1200	440	ug/Kg	10	☼	8260B	Total/NA

Client Sample ID: GP-7-19

Lab Sample ID: 480-23878-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	87		5.7	1.1	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	0.67	J	5.7	0.39	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	1.8	J	5.7	0.86	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	1.1	J	11	0.96	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	16		5.7	0.76	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	10		5.7	0.46	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	1.1	J	11	0.96	ug/Kg	1	☼	8260B	Total/NA

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Client Sample ID: GP-2-7

Date Collected: 08/14/12 10:00

Date Received: 08/14/12 16:15

Lab Sample ID: 480-23878-1

Matrix: Solid

Percent Solids: 80.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	2.0	J B	5.6	1.1	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
1,3,5-Trimethylbenzene	ND		5.6	0.36	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
4-Isopropyltoluene	ND		5.6	0.45	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
Benzene	ND		5.6	0.28	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
Ethylbenzene	0.60	J	5.6	0.39	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
Isopropylbenzene	ND		5.6	0.85	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
Methyl tert-butyl ether	ND		5.6	0.55	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
m-Xylene & p-Xylene	2.6	J	11	0.95	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
Naphthalene	ND		5.6	0.76	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
n-Butylbenzene	ND		5.6	0.49	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
N-Propylbenzene	ND		5.6	0.45	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
o-Xylene	ND		5.6	0.74	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
sec-Butylbenzene	ND		5.6	0.49	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
tert-Butylbenzene	ND		5.6	0.59	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
Toluene	1.4	J	5.6	0.43	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1
Xylenes, Total	2.6	J	11	0.95	ug/Kg	☼	08/15/12 09:29	08/18/12 16:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		64 - 126	08/15/12 09:29	08/18/12 16:20	1
Toluene-d8 (Surr)	88		71 - 125	08/15/12 09:29	08/18/12 16:20	1
4-Bromofluorobenzene (Surr)	84		72 - 126	08/15/12 09:29	08/18/12 16:20	1

Client Sample ID: GP-3-13

Date Collected: 08/14/12 11:00

Date Received: 08/14/12 16:15

Lab Sample ID: 480-23878-2

Matrix: Solid

Percent Solids: 87.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	2.0	J B	5.6	1.1	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
1,3,5-Trimethylbenzene	ND		5.6	0.36	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
4-Isopropyltoluene	ND		5.6	0.45	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
Benzene	ND		5.6	0.27	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
Ethylbenzene	0.61	J	5.6	0.39	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
Isopropylbenzene	ND		5.6	0.84	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
Methyl tert-butyl ether	ND		5.6	0.55	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
m-Xylene & p-Xylene	2.6	J	11	0.94	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
Naphthalene	ND		5.6	0.75	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
n-Butylbenzene	ND		5.6	0.49	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
N-Propylbenzene	ND		5.6	0.45	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
o-Xylene	ND		5.6	0.73	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
sec-Butylbenzene	ND		5.6	0.49	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
tert-Butylbenzene	ND		5.6	0.58	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
Toluene	1.1	J	5.6	0.42	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1
Xylenes, Total	2.6	J	11	0.94	ug/Kg	☼	08/15/12 09:29	08/18/12 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		64 - 126	08/15/12 09:29	08/18/12 16:46	1
Toluene-d8 (Surr)	90		71 - 125	08/15/12 09:29	08/18/12 16:46	1
4-Bromofluorobenzene (Surr)	85		72 - 126	08/15/12 09:29	08/18/12 16:46	1

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Client Sample ID: GP-4-12

Lab Sample ID: 480-23878-3

Date Collected: 08/14/12 12:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 84.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1.4	J B	5.1	0.97	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
1,3,5-Trimethylbenzene	ND		5.1	0.33	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
4-Isopropyltoluene	ND		5.1	0.41	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
Benzene	ND		5.1	0.25	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
Ethylbenzene	ND		5.1	0.35	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
Isopropylbenzene	ND		5.1	0.76	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
Methyl tert-butyl ether	ND		5.1	0.50	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
m-Xylene & p-Xylene	1.7	J	10	0.85	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
Naphthalene	ND		5.1	0.68	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
n-Butylbenzene	ND		5.1	0.44	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
N-Propylbenzene	ND		5.1	0.41	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
o-Xylene	ND		5.1	0.66	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
sec-Butylbenzene	ND		5.1	0.44	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
tert-Butylbenzene	ND		5.1	0.53	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
Toluene	ND		5.1	0.38	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
Xylenes, Total	1.7	J	10	0.85	ug/Kg	☼	08/15/12 09:29	08/18/12 17:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		64 - 126				08/15/12 09:29	08/18/12 17:11	1
Toluene-d8 (Surr)	88		71 - 125				08/15/12 09:29	08/18/12 17:11	1
4-Bromofluorobenzene (Surr)	84		72 - 126				08/15/12 09:29	08/18/12 17:11	1

Client Sample ID: GP-5-15

Lab Sample ID: 480-23878-4

Date Collected: 08/14/12 13:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 85.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		230	65	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
1,3,5-Trimethylbenzene	ND		230	70	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
4-Isopropyltoluene	4800		230	78	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
Benzene	ND		230	11	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
Ethylbenzene	ND		230	68	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
Isopropylbenzene	ND		230	35	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
Methyl tert-butyl ether	ND		230	88	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
m-Xylene & p-Xylene	ND		470	130	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
Naphthalene	ND		230	78	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
n-Butylbenzene	15000		230	68	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
N-Propylbenzene	280		230	61	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
o-Xylene	ND		230	30	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
sec-Butylbenzene	6300		230	86	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
tert-Butylbenzene	ND		230	65	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
Toluene	ND		230	62	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
Xylenes, Total	ND		470	39	ug/Kg	☼	08/21/12 18:15	08/22/12 18:20	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	189	X	53 - 146				08/21/12 18:15	08/22/12 18:20	2
Toluene-d8 (Surr)	75		50 - 149				08/21/12 18:15	08/22/12 18:20	2
4-Bromofluorobenzene (Surr)	70		49 - 148				08/21/12 18:15	08/22/12 18:20	2

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Client Sample ID: GP-6-16

Lab Sample ID: 480-23878-5

Date Collected: 08/14/12 14:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 84.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	39000		1200	330	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
1,3,5-Trimethylbenzene	1200		1200	360	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
4-Isopropyltoluene	5700		1200	400	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
Benzene	ND		1200	57	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
Ethylbenzene	ND		1200	340	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
Isopropylbenzene	1000	J	1200	180	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
Methyl tert-butyl ether	ND		1200	450	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
m-Xylene & p-Xylene	ND		2400	660	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
Naphthalene	ND		1200	400	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
n-Butylbenzene	24000		1200	350	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
N-Propylbenzene	40000		1200	310	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
o-Xylene	ND		1200	150	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
sec-Butylbenzene	7000		1200	440	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
tert-Butylbenzene	ND		1200	330	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
Toluene	ND		1200	320	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
Xylenes, Total	ND		2400	200	ug/Kg	☼	08/21/12 18:15	08/22/12 15:27	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	57		53 - 146				08/21/12 18:15	08/22/12 15:27	10
Toluene-d8 (Surr)	75		50 - 149				08/21/12 18:15	08/22/12 15:27	10
4-Bromofluorobenzene (Surr)	70		49 - 148				08/21/12 18:15	08/22/12 15:27	10

Client Sample ID: GP-7-19

Lab Sample ID: 480-23878-6

Date Collected: 08/14/12 15:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 87.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	87		5.7	1.1	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
1,3,5-Trimethylbenzene	ND		5.7	0.37	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
4-Isopropyltoluene	ND		5.7	0.46	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
Benzene	ND		5.7	0.28	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
Ethylbenzene	0.67	J	5.7	0.39	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
Isopropylbenzene	1.8	J	5.7	0.86	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
Methyl tert-butyl ether	ND		5.7	0.56	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
m-Xylene & p-Xylene	1.1	J	11	0.96	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
Naphthalene	16		5.7	0.76	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
n-Butylbenzene	ND		5.7	0.49	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
N-Propylbenzene	10		5.7	0.46	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
o-Xylene	ND		5.7	0.74	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
sec-Butylbenzene	ND		5.7	0.49	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
tert-Butylbenzene	ND		5.7	0.59	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
Toluene	ND		5.7	0.43	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
Xylenes, Total	1.1	J	11	0.96	ug/Kg	☼	08/20/12 22:02	08/21/12 02:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		64 - 126				08/20/12 22:02	08/21/12 02:16	1
Toluene-d8 (Surr)	87		71 - 125				08/20/12 22:02	08/21/12 02:16	1
4-Bromofluorobenzene (Surr)	85		72 - 126				08/20/12 22:02	08/21/12 02:16	1

Surrogate Summary

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (64-126)	TOL (71-125)	BFB (72-126)
480-23878-1	GP-2-7	86	88	84
480-23878-2	GP-3-13	85	90	85
480-23878-3	GP-4-12	86	88	84
480-23878-6	GP-7-19	94	87	85
LCS 480-77184/7	Lab Control Sample	87	90	86
LCS 480-77404/5	Lab Control Sample	89	86	85
MB 480-77184/8	Method Blank	83	92	86
MB 480-77404/6	Method Blank	89	87	84

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (53-146)	TOL (50-149)	BFB (49-148)
480-23878-4	GP-5-15	189 X	75	70
480-23878-5	GP-6-16	57	75	70
LCS 480-77562/1-A	Lab Control Sample	105	111	108
MB 480-77562/2-A	Method Blank	107	113	108

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-77184/8

Matrix: Solid

Analysis Batch: 77184

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimet5ylben. ene	103	J	g00	009	uh/z h			08/18/12 13:11	1
1,3,g-Trimet5ylben. ene	ND		g00	002	uh/z h			08/18/12 13:11	1
4-Isopropyltoluene	ND		g00	000	uh/z h			08/18/12 13:11	1
Ben. ene	ND		g00	00g	uh/z h			08/18/12 13:11	1
Et5ylben. ene	ND		g00	00g	uh/z h			08/18/12 13:11	1
Isopropylben. ene	ND		g00	00g	uh/z h			08/18/12 13:11	1
Met5yl tert-butyl et5er	ND		g00	00K	uh/z h			08/18/12 13:11	1
m-Xylene f p-Xylene	ND		10	004	uh/z h			08/18/12 13:11	1
Nap5t5alene	ND		g00	007	uh/z h			08/18/12 13:11	1
n-Butylben. ene	ND		g00	004	uh/z h			08/18/12 13:11	1
N-Propylben. ene	ND		g00	000	uh/z h			08/18/12 13:11	1
o-Xylene	ND		g00	00g	uh/z h			08/18/12 13:11	1
sec-Butylben. ene	ND		g00	004	uh/z h			08/18/12 13:11	1
tert-Butylben. ene	ND		g00	002	uh/z h			08/18/12 13:11	1
Toluene	ND		g00	008	uh/z h			08/18/12 13:11	1
Xylenes, Total	ND		10	004	uh/z h			08/18/12 13:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		64 - 126		08/18/12 13:11	1
Toluene-d8 (Surr)	92		71 - 125		08/18/12 13:11	1
4-Bromofluorobenzene (Surr)	86		72 - 126		08/18/12 13:11	1

Lab Sample ID: LCS 480-77184/7

Matrix: Solid

Analysis Batch: 77184

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimet5ylben. ene	g00	430		uh/z h		87	74 - 120
Ben. ene	g00	490		uh/z h		K3	7K - 127
Et5ylben. ene	g00	4g0		uh/z h		K2	80 - 120
Met5yl tert-butyl et5er	g00	470		uh/z h		K4	93 - 12g
m-Xylene f p-Xylene	100	8K0		uh/z h		K0	70 - 130
o-Xylene	g00	490		uh/z h		K2	70 - 130
Toluene	g00	440		uh/z h		8K	74 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		64 - 126
Toluene-d8 (Surr)	90		71 - 125
4-Bromofluorobenzene (Surr)	86		72 - 126

Lab Sample ID: MB 480-77404/6

Matrix: Solid

Analysis Batch: 77404

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimet5ylben. ene	ND		g00	009	uh/z h			08/21/12 01:38	1
1,3,g-Trimet5ylben. ene	ND		g00	002	uh/z h			08/21/12 01:38	1
4-Isopropyltoluene	ND		g00	000	uh/z h			08/21/12 01:38	1
Ben. ene	ND		g00	00g	uh/z h			08/21/12 01:38	1

QC Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-77404/6

Matrix: Solid

Analysis Batch: 77404

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Et5ylben. ene	ND		g00	063g	uh/z h			08/21/12 01:38	1
Isopropylben. ene	ND		g00	067g	uh/z h			08/21/12 01:38	1
Met5yl tert-butyl et5er	ND		g00	064K	uh/z h			08/21/12 01:38	1
m-Xylene f p-Xylene	ND		10	064	uh/z h			08/21/12 01:38	1
Nap5t5alene	ND		g00	067	uh/z h			08/21/12 01:38	1
n-Butylben. ene	ND		g00	064	uh/z h			08/21/12 01:38	1
N-Propylben. ene	ND		g00	060	uh/z h			08/21/12 01:38	1
o-Xylene	ND		g00	06g	uh/z h			08/21/12 01:38	1
sec-Butylben. ene	ND		g00	064	uh/z h			08/21/12 01:38	1
tert-Butylben. ene	ND		g00	062	uh/z h			08/21/12 01:38	1
Toluene	ND		g00	068	uh/z h			08/21/12 01:38	1
Xylenes, Total	ND		10	064	uh/z h			08/21/12 01:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		64 - 126		08/21/12 01:38	1
Toluene-d8 (Surr)	87		71 - 125		08/21/12 01:38	1
4-Bromofluorobenzene (Surr)	84		72 - 126		08/21/12 01:38	1

Lab Sample ID: LCS 480-77404/5

Matrix: Solid

Analysis Batch: 77404

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimet5ylben. ene	g00	426		uh/z h		84	74 - 120
Ben. ene	g00	4g6		uh/z h		K0	7K - 127
Et5ylben. ene	g00	496		uh/z h		K2	80 - 120
Met5yl tert-butyl et5er	g00	4g6		uh/z h		K0	93 - 12g
m-Xylene f p-Xylene	100	K06		uh/z h		K0	70 - 130
o-Xylene	g00	4g6		uh/z h		K1	70 - 130
Toluene	g00	436		uh/z h		89	74 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		64 - 126
Toluene-d8 (Surr)	86		71 - 125
4-Bromofluorobenzene (Surr)	85		72 - 126

Lab Sample ID: MB 480-77562/2-A

Matrix: Solid

Analysis Batch: 77535

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 77562

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimet5ylben. ene	ND		K7	27	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
1,3,g-Trimet5ylben. ene	ND		K7	2K	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
4-Isopropyltoluene	ND		K7	33	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
Ben. ene	ND		K7	46	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
Et5ylben. ene	ND		K7	28	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
Isopropylben. ene	ND		K7	1g	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
Met5yl tert-butyl et5er	ND		K7	37	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
m-Xylene f p-Xylene	ND		1K0	g4	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1

QC Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-77562/2-A

Matrix: Solid

Analysis Batch: 77535

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 77562

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nap5t5alene	ND		K7	33	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
n-Butylben. ene	ND		K7	28	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
N-Propylben. ene	ND		K7	2g	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
o-Xylene	ND		K7	13	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
sec-Butylben. ene	ND		K7	39	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
tert-Butylben. ene	ND		K7	27	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
Toluene	ND		K7	29	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1
Xylenes, Total	ND		1K0	19	uh/z h		08/21/12 18:1g	08/21/12 1K:3g	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		53 - 146	08/21/12 18:15	08/21/12 19:35	1
Toluene-d8 (Surr)	113		50 - 149	08/21/12 18:15	08/21/12 19:35	1
4-Bromofluorobenzene (Surr)	108		49 - 148	08/21/12 18:15	08/21/12 19:35	1

Lab Sample ID: LCS 480-77562/1-A

Matrix: Solid

Analysis Batch: 77535

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 77562

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimet5ylben. ene	2420	2870		uh/z h		11K	
Ben. ene	2420	2840		uh/z h		118	7g - 131
Et5ylben. ene	2420	28K0		uh/z h		120	
Met5yl tert-butyl et5er	2420	2g20		uh/z h		104	
m-Xylene f p-Xylene	4840	g970		uh/z h		117	
o-Xylene	2420	28g0		uh/z h		118	
Toluene	2420	2830		uh/z h		117	79 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		53 - 146
Toluene-d8 (Surr)	111		50 - 149
4-Bromofluorobenzene (Surr)	108		49 - 148

QC Association Summary

Client: Iyer Environmental Group, LLC
 Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

GC/MS VOA

Prep Batch: 76644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-23878-1	GP-2-7	Total/NA	Solid	5035	
480-23878-2	GP-3-13	Total/NA	Solid	5035	
480-23878-3	GP-4-12	Total/NA	Solid	5035	

Analysis Batch: 77184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-23878-1	GP-2-7	Total/NA	Solid	8260B	76644
480-23878-2	GP-3-13	Total/NA	Solid	8260B	76644
480-23878-3	GP-4-12	Total/NA	Solid	8260B	76644
LCS 480-77184/7	Lab Control Sample	Total/NA	Solid	8260B	
MB 480-77184/8	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 77404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-23878-6	GP-7-19	Total/NA	Solid	8260B	77407
LCS 480-77404/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 480-77404/6	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 77407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-23878-6	GP-7-19	Total/NA	Solid	5035	

Analysis Batch: 77535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-77562/1-A	Lab Control Sample	Total/NA	Solid	8260B	77562
MB 480-77562/2-A	Method Blank	Total/NA	Solid	8260B	77562

Prep Batch: 77562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-23878-4	GP-5-15	Total/NA	Solid	5035	
480-23878-5	GP-6-16	Total/NA	Solid	5035	
LCS 480-77562/1-A	Lab Control Sample	Total/NA	Solid	5035	
MB 480-77562/2-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 77652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-23878-4	GP-5-15	Total/NA	Solid	8260B	77562
480-23878-5	GP-6-16	Total/NA	Solid	8260B	77562

General Chemistry

Analysis Batch: 76683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-23878-1	GP-2-7	Total/NA	Solid	Moisture	
480-23878-2	GP-3-13	Total/NA	Solid	Moisture	
480-23878-3	GP-4-12	Total/NA	Solid	Moisture	
480-23878-4	GP-5-15	Total/NA	Solid	Moisture	
480-23878-5	GP-6-16	Total/NA	Solid	Moisture	
480-23878-6	GP-7-19	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Iyer Environmental Group, LLC
 Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Client Sample ID: GP-2-7

Lab Sample ID: 480-23878-1

Date Collected: 08/14/12 10:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 80.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			76644	08/15/12 09:29	JMB	TAL BUF
Total/NA	Analysis	8260B		1	77184	08/18/12 16:20	CDC	TAL BUF
Total/NA	Analysis	Moisture		1	76683	08/15/12 11:38	ZLR	TAL BUF

Client Sample ID: GP-3-13

Lab Sample ID: 480-23878-2

Date Collected: 08/14/12 11:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			76644	08/15/12 09:29	JMB	TAL BUF
Total/NA	Analysis	8260B		1	77184	08/18/12 16:46	CDC	TAL BUF
Total/NA	Analysis	Moisture		1	76683	08/15/12 11:38	ZLR	TAL BUF

Client Sample ID: GP-4-12

Lab Sample ID: 480-23878-3

Date Collected: 08/14/12 12:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			76644	08/15/12 09:29	JMB	TAL BUF
Total/NA	Analysis	8260B		1	77184	08/18/12 17:11	CDC	TAL BUF
Total/NA	Analysis	Moisture		1	76683	08/15/12 11:38	ZLR	TAL BUF

Client Sample ID: GP-5-15

Lab Sample ID: 480-23878-4

Date Collected: 08/14/12 13:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			77562	08/21/12 18:15	RL	TAL BUF
Total/NA	Analysis	8260B		2	77652	08/22/12 18:20	RJ	TAL BUF
Total/NA	Analysis	Moisture		1	76683	08/15/12 11:38	ZLR	TAL BUF

Client Sample ID: GP-6-16

Lab Sample ID: 480-23878-5

Date Collected: 08/14/12 14:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 84.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			77562	08/21/12 18:15	RL	TAL BUF
Total/NA	Analysis	8260B		10	77652	08/22/12 15:27	RJ	TAL BUF
Total/NA	Analysis	Moisture		1	76683	08/15/12 11:38	ZLR	TAL BUF

Lab Chronicle

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Client Sample ID: GP-7-19

Lab Sample ID: 480-23878-6

Date Collected: 08/14/12 15:00

Matrix: Solid

Date Received: 08/14/12 16:15

Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			77407	08/20/12 22:02	JMB	TAL BUF
Total/NA	Analysis	8260B		1	77404	08/21/12 02:16	JMB	TAL BUF
Total/NA	Analysis	Moisture		1	76683	08/15/12 11:38	ZLR	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



Certification Summary

Client: Iyer Environmental Group, LLC
 Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAC	9	1169CA	09-30-12
Connecticut	State Program	1	PH-0568	09-30-12
Florida	NELAC	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-13
Georgia	State Program	4	956	03-31-12
Illinois	NELAC	5	200003	09-30-12
Iowa	State Program	7	374	03-01-13
Kansas	NELAC	7	E-10187	01-31-13
Kentucky	State Program	4	90029	12-31-12
Kentucky (UST)	State Program	4	30	04-01-13
Louisiana	NELAC	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-12
Maryland	State Program	3	294	03-31-13
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13
Minnesota	NELAC	5	036-999-337	12-31-12
New Hampshire	NELAC	1	2973	09-11-12
New Hampshire	NELAC	1	2337	11-17-12
New Jersey	NELAC	2	NY455	06-30-13
New York	NELAC	2	10026	03-31-13
North Dakota	State Program	8	R-176	03-31-13
Oklahoma	State Program	6	9421	08-31-12
Oregon	NELAC	10	NY200003	06-09-13
Pennsylvania	NELAC	3	68-00281	07-31-13
Tennessee	State Program	4	TN02970	04-01-13
Texas	NELAC	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAC	3	460185	09-14-12
Washington	State Program	10	C784	02-10-13
West Virginia DEP	State Program	3	252	09-30-12
Wisconsin	State Program	5	998310390	08-31-12



Method Summary

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



Sample Summary

Client: Iyer Environmental Group, LLC
Project/Site: Stars Analysis

TestAmerica Job ID: 480-23878-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-23878-1	GP-2-7	Solid	08/14/12 10:00	08/14/12 16:15
480-23878-2	GP-3-13	Solid	08/14/12 11:00	08/14/12 16:15
480-23878-3	GP-4-12	Solid	08/14/12 12:00	08/14/12 16:15
480-23878-4	GP-5-15	Solid	08/14/12 13:00	08/14/12 16:15
480-23878-5	GP-6-16	Solid	08/14/12 14:00	08/14/12 16:15
480-23878-6	GP-7-19	Solid	08/14/12 15:00	08/14/12 16:15

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

TAL-4124 (1/007)

Temperature on Receipt: _____

Drinking Water? Yes No

Client: **Iyer Environmental Group**
 Address: **44 Rolling Hills Dr**
 City: **Orchard Park** State: **NY** Zip Code: **14127**
 Project Name and Location (State): **77 W Huron St (NY)**
 Contract/Purchase Order/Quote No. _____

Project Manager: **Dharma Iyer**
 Telephone Number (Area Code)/Fax Number: **(716) 662-4157 / (716) 662-2118**
 Date: **Aug 14, 2012**
 Lab Number: **212450**
 Page **1** of **1**

Special Instructions/
Conditions of Receipt

Analysis (Attach list if
more space is needed)

STARS VOCs

Containers &
Preservatives

Matrix

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives										
			Air	Soil	Soil	Water	UNCON	H2SO4	HCl	NaOH							
GP-2-7	Aug 14, 12	10:00A		✓													
GP-3-13	}	11:00A		✓													
GP-4-12		12:00P		✓													
GP-5-15	}	1:00P		✓													
GP-6-16		2:00P		✓													
GP-7-19		3:00P		✓													

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Other _____

Form-Ahead-Time-Required
 24 Hours 48 Hours 7 Days 14 Days 21 Days

Sample Disposal
 Return To Client Archive For _____ Months Destroy (per I.M. 601)

OC Requirements (Specify)

1. Relinquished By: **Richard C. Allen Jr** Date: **Aug 14, 2012** Time: **16:15**

2. Relinquished By: _____ Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____

Comments: **#3 21.2 (soils)**

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy



Login Sample Receipt Checklist

Client: Iyer Environmental Group, LLC

Job Number: 480-23878-1

Login Number: 23878

List Number: 1

Creator: Robitaille, Zach L

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	IYER
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-24074-1

Client Project/Site: 77 W. Huron St., NY


For:

Iyer Environmental Group, LLC

44 Rolling Hills Drive

Orchard Park, New York 14127

Attn: Dr. Dharmarajan R Iyer



Authorized for release by:

8/31/2012 4:12:33 PM

Melissa Deyo

Project Manager I

melissa.deyo@testamericainc.com

LINKS

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results through

TotalAccess

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
B	Compound was found in the blank and sample.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Job ID: 480-24074-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-24074-1

Receipt

The samples were received on 8/16/2012 7:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 22.1° C.

GC/MS VOA

Method 8260B: The following samples were analyzed medium level to bring the concentration of target analytes within the calibration range: GP-8-16 (480-24074-1), GP-14-13 (480-24074-10), GP-14-16 (480-24074-11), GP-15-13 (480-24074-12) and GP-16-13 (480-24074-13). Elevated reporting limits (RLs) are provided.

Method 8260B: The following sample was analyzed at a reduced initial sample weight due to the nature of the sample matrix: GP-14-11 (480-24074-9). Elevated reporting limits (RLs) are provided.

Method 8260B: Surrogate recoveries for the following samples were outside control limits: GP-14-13 (480-24074-10), GP-15-13 (480-24074-12) and GP-16-13 (480-24074-13). Evidence of matrix interference was present.

Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: GP-14-13 (480-24074-10 DL), GP-15-13 (480-24074-12 DL) and GP-16-13 (480-24074-13 DL). Elevated reporting limits (RLs) are provided.

Method 8260B: The following samples were diluted due to the nature of the TCLP matrix: GP-14 LF COMP (480-24074-17), GP-16 LF COMP (480-24074-18), GP-17 LF COMP (480-24074-19) and (LB 480-77533/1-A). Elevated reporting limits (RLs) are provided.

Method 8260B: The method blank associated with batch 77484 contained several analytes greater than the method detection limit (MDL). These target analyte concentrations were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.

GC/MS Semi VOA

Method 8270C: The following sample was diluted due to the nature of the sample matrix: GP-8-16 (480-24074-1), GP-14-13 (480-24074-10), GP-14-16 (480-24074-11), GP-16-13 (480-24074-13). Elevated reporting limits (RLs) are provided.

Method 8270C: The laboratory control sample (LCS) for preparation batch 77744 exceeded control limits for multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data has been reported.

No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

General Chemistry

Method 1664A: The method blank for batch 77979 contained Oil & Grease above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

Detection Summary

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-8-16

Lab Sample ID: 480-24074-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2400		120	33	ug/Kg	1	☼	8260B	Total/NA
4-Isopropyltoluene	2900		120	39	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	55	J	120	18	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	120		120	39	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	10000		120	34	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	5200		120	31	ug/Kg	1	☼	8260B	Total/NA
sec-Butylbenzene	3300		120	43	ug/Kg	1	☼	8260B	Total/NA
tert-Butylbenzene	77	J	120	33	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-10-13

Lab Sample ID: 480-24074-2

No Detections

Client Sample ID: GP-10-19

Lab Sample ID: 480-24074-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	4.0	J	5.7	1.1	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	1.2	J	11	0.96	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	3.1	J	5.7	0.77	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	3.8	J	5.7	0.46	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	1.2	J	11	0.96	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-10-24

Lab Sample ID: 480-24074-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	3.0	J B	6.1	1.2	ug/Kg	1	☼	8260B	Total/NA
4-Isopropyltoluene	1.7	J	6.1	0.49	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	1.9	J B	12	1.0	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	5.7	J	6.1	0.53	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	3.3	J	6.1	0.48	ug/Kg	1	☼	8260B	Total/NA
sec-Butylbenzene	1.9	J	6.1	0.53	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	1.9	J B	12	1.0	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-11-15

Lab Sample ID: 480-24074-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	25	B	5.9	1.1	ug/Kg	1	☼	8260B	Total/NA
4-Isopropyltoluene	7.1		5.9	0.48	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	1.6	J B	12	1.0	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	21		5.9	0.52	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	20		5.9	0.47	ug/Kg	1	☼	8260B	Total/NA
sec-Butylbenzene	8.5		5.9	0.52	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	1.6	J B	12	1.0	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-11-18

Lab Sample ID: 480-24074-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	69	B	5.9	1.1	ug/Kg	1	☼	8260B	Total/NA
4-Isopropyltoluene	1.4	J	5.9	0.47	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	1.2	J	5.9	0.88	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	2.3	J B	12	0.99	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	9.9	B	5.9	0.79	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	5.3	J	5.9	0.51	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	7.5		5.9	0.47	ug/Kg	1	☼	8260B	Total/NA

Detection Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-11-18 (Continued)

Lab Sample ID: 480-24074-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	2.3	J B	12	0.99	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-12-15

Lab Sample ID: 480-24074-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	29	B	5.7	1.1	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	6.4		5.7	0.37	ug/Kg	1	☼	8260B	Total/NA
4-Isopropyltoluene	1.2	J	5.7	0.45	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	3.8	J B	11	0.95	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	110	B	5.7	0.76	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	4.9	J	5.7	0.49	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	3.4	J	5.7	0.45	ug/Kg	1	☼	8260B	Total/NA
o-Xylene	1.5	J	5.7	0.74	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	5.3	J B	11	0.95	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-12-20

Lab Sample ID: 480-24074-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	3.6	J B	5.7	1.1	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	3.6	J B	11	0.96	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	7.0	B	5.7	0.77	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	1.4	J	5.7	0.50	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	1.0	J	5.7	0.46	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	3.6	J B	11	0.96	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-14-11

Lab Sample ID: 480-24074-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	26	J	28	5.4	ug/Kg	1	☼	8260B	Total/NA
4-Isopropyltoluene	31		28	2.3	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	17	J	28	4.2	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	18	J	28	2.2	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-14-13

Lab Sample ID: 480-24074-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Isopropyltoluene	2200		120	39	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	8700		120	17	ug/Kg	1	☼	8260B	Total/NA
sec-Butylbenzene	3200		120	43	ug/Kg	1	☼	8260B	Total/NA
1,2,4-Trimethylbenzene - DL	290000		4600	1300	ug/Kg	40	☼	8260B	Total/NA
1,3,5-Trimethylbenzene - DL	81000		4600	1400	ug/Kg	40	☼	8260B	Total/NA
Ethylbenzene - DL	26000		4600	1300	ug/Kg	40	☼	8260B	Total/NA
m-Xylene & p-Xylene - DL	140000		9300	2600	ug/Kg	40	☼	8260B	Total/NA
Naphthalene - DL	49000		4600	1600	ug/Kg	40	☼	8260B	Total/NA
n-Butylbenzene - DL	22000		4600	1400	ug/Kg	40	☼	8260B	Total/NA
N-Propylbenzene - DL	39000		4600	1200	ug/Kg	40	☼	8260B	Total/NA
o-Xylene - DL	26000		4600	600	ug/Kg	40	☼	8260B	Total/NA
Xylenes, Total - DL	170000		9300	780	ug/Kg	40	☼	8260B	Total/NA
Naphthalene	10000		3900	65	ug/Kg	20	☼	8270C	Total/NA

Client Sample ID: GP-14-16

Lab Sample ID: 480-24074-11

Detection Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-14-16 (Continued)

Lab Sample ID: 480-24074-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1100		120	33	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	300		120	36	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	100	J	240	66	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	530		120	40	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	160		120	35	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	120		120	31	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	100	J	240	20	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-15-13

Lab Sample ID: 480-24074-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Isopropyltoluene	3600		110	39	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	6700		110	33	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	11000		110	17	ug/Kg	1	☼	8260B	Total/NA
o-Xylene	9800		110	15	ug/Kg	1	☼	8260B	Total/NA
sec-Butylbenzene	4300		110	42	ug/Kg	1	☼	8260B	Total/NA
1,2,4-Trimethylbenzene - DL	220000		2300	640	ug/Kg	20	☼	8260B	Total/NA
1,3,5-Trimethylbenzene - DL	69000		2300	690	ug/Kg	20	☼	8260B	Total/NA
m-Xylene & p-Xylene - DL	74000		4600	1300	ug/Kg	20	☼	8260B	Total/NA
Naphthalene - DL	31000		2300	780	ug/Kg	20	☼	8260B	Total/NA
n-Butylbenzene - DL	23000		2300	670	ug/Kg	20	☼	8260B	Total/NA
N-Propylbenzene - DL	29000		2300	600	ug/Kg	20	☼	8260B	Total/NA
Xylenes, Total - DL	95000		4600	390	ug/Kg	20	☼	8260B	Total/NA

Client Sample ID: GP-16-13

Lab Sample ID: 480-24074-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Isopropyltoluene	1600		120	39	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	3500		120	17	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	11000		120	39	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	7800		120	34	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	9900		120	30	ug/Kg	1	☼	8260B	Total/NA
o-Xylene	11000		120	15	ug/Kg	1	☼	8260B	Total/NA
sec-Butylbenzene	1600		120	43	ug/Kg	1	☼	8260B	Total/NA
Toluene	3200		120	31	ug/Kg	1	☼	8260B	Total/NA
1,2,4-Trimethylbenzene - DL	69000		1200	320	ug/Kg	10	☼	8260B	Total/NA
1,3,5-Trimethylbenzene - DL	21000		1200	350	ug/Kg	10	☼	8260B	Total/NA
Ethylbenzene - DL	19000		1200	340	ug/Kg	10	☼	8260B	Total/NA
m-Xylene & p-Xylene - DL	69000		2300	640	ug/Kg	10	☼	8260B	Total/NA
Xylenes, Total - DL	88000		2300	190	ug/Kg	10	☼	8260B	Total/NA
Naphthalene	530	J	980	16	ug/Kg	5	☼	8270C	Total/NA

Client Sample ID: GP-16-16

Lab Sample ID: 480-24074-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	4.8	J	6.0	1.1	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	35		6.0	0.80	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	0.54	J	6.0	0.52	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-17-13

Lab Sample ID: 480-24074-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	110		5.8	1.1	ug/Kg	1	☼	8260B	Total/NA

Detection Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-17-13 (Continued)

Lab Sample ID: 480-24074-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	26		5.8	0.37	ug/Kg	1	☼	8260B	Total/NA
4-Isopropyltoluene	1.9	J	5.8	0.47	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	12		5.8	0.40	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	2.4	J	5.8	0.88	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	55		12	0.98	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	140		5.8	0.78	ug/Kg	1	☼	8260B	Total/NA
n-Butylbenzene	5.7	J	5.8	0.51	ug/Kg	1	☼	8260B	Total/NA
N-Propylbenzene	10		5.8	0.46	ug/Kg	1	☼	8260B	Total/NA
o-Xylene	13		5.8	0.76	ug/Kg	1	☼	8260B	Total/NA
Toluene	3.7	J	5.8	0.44	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	68		12	0.98	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	66	J	200	3.3	ug/Kg	1	☼	8270C	Total/NA

Client Sample ID: GP-17-16

Lab Sample ID: 480-24074-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2.0	J	5.9	1.1	ug/Kg	1	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	2.9	J	5.9	0.38	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	0.71	J	5.9	0.40	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	1.8	J	12	0.99	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	9.6		5.9	0.79	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	1.8	J	12	0.99	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: GP-14 LF COMP

Lab Sample ID: 480-24074-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.077		0.0050	0.0030	mg/L	1		6010B	TCLP
Oil & Grease	500	B	119	33.3	mg/Kg	1	☼	1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Flashpoint	>176.0		50.0	50.0	Degrees F	1		1010	Total/NA
pH	7.48		0.100	0.100	SU	1		9045C	Total/NA

Client Sample ID: GP-16 LF COMP

Lab Sample ID: 480-24074-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.012		0.0050	0.0030	mg/L	1		6010B	TCLP
Oil & Grease	609	B	117	32.8	mg/Kg	1	☼	1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Flashpoint	>176.0		50.0	50.0	Degrees F	1		1010	Total/NA
pH	8.20		0.100	0.100	SU	1		9045C	Total/NA

Client Sample ID: GP-17 LF COMP

Lab Sample ID: 480-24074-19

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Flashpoint	>176.0		50.0	50.0	Degrees F	1		1010	Total/NA
pH	8.48		0.100	0.100	SU	1		9045C	Total/NA

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-8-16

Lab Sample ID: 480-24074-1

Date Collected: 08/16/12 09:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	2400		120	33	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
1,3,5-Trimethylbenzene	ND		120	35	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
4-Isopropyltoluene	2900		120	39	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
Benzene	ND		120	5.6	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
Ethylbenzene	ND		120	34	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
Isopropylbenzene	55 J		120	18	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
Methyl tert-butyl ether	ND		120	44	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
m-Xylene & p-Xylene	ND		230	65	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
Naphthalene	120		120	39	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
n-Butylbenzene	10000		120	34	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
N-Propylbenzene	5200		120	31	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
o-Xylene	ND		120	15	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
sec-Butylbenzene	3300		120	43	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
tert-Butylbenzene	77 J		120	33	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
Toluene	ND		120	31	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
Xylenes, Total	ND		230	20	ug/Kg	☼	08/22/12 18:31	08/23/12 07:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	143		53 - 146				08/22/12 18:31	08/23/12 07:41	1
Toluene-d8 (Surr)	74		50 - 149				08/22/12 18:31	08/23/12 07:41	1
4-Bromofluorobenzene (Surr)	72		49 - 148				08/22/12 18:31	08/23/12 07:41	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		990	12	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Acenaphthylene	ND		990	8.0	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Anthracene	ND		990	25	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Benz(a)anthracene	ND		990	17	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Benzo(a)pyrene	ND *		990	24	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Benzo(b)fluoranthene	ND *		990	19	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Benzo(g,h,i)perylene	ND *		990	12	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Benzo(k)fluoranthene	ND *		990	11	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Chrysene	ND		990	9.8	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Dibenz(a,h)anthracene	ND *		990	12	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Fluoranthene	ND		990	14	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Fluorene	ND		990	23	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Indeno(1,2,3-c,d)pyrene	ND *		990	27	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Naphthalene	ND		990	16	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Phenanthrene	ND		990	21	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Pyrene	ND		990	6.4	ug/Kg	☼	08/22/12 14:59	08/31/12 13:27	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	61		34 - 132				08/22/12 14:59	08/31/12 13:27	5
2-Fluorobiphenyl	73		37 - 120				08/22/12 14:59	08/31/12 13:27	5
p-Terphenyl-d14	96		65 - 153				08/22/12 14:59	08/31/12 13:27	5

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-10-13

Lab Sample ID: 480-24074-2

Date Collected: 08/16/12 10:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 83.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		5.9	1.1	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
1,3,5-Trimethylbenzene	ND		5.9	0.38	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
4-Isopropyltoluene	ND		5.9	0.47	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
Benzene	ND		5.9	0.29	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
Ethylbenzene	ND		5.9	0.41	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
Isopropylbenzene	ND		5.9	0.89	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
Methyl tert-butyl ether	ND		5.9	0.58	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
m-Xylene & p-Xylene	ND		12	0.99	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
Naphthalene	ND		5.9	0.79	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
n-Butylbenzene	ND		5.9	0.51	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
N-Propylbenzene	ND		5.9	0.47	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
o-Xylene	ND		5.9	0.77	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
sec-Butylbenzene	ND		5.9	0.51	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
tert-Butylbenzene	ND		5.9	0.61	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
Toluene	ND		5.9	0.45	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1
Xylenes, Total	ND		12	0.99	ug/Kg	☼	08/22/12 00:01	08/22/12 23:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		64 - 126	08/22/12 00:01	08/22/12 23:11	1
Toluene-d8 (Surr)	86		71 - 125	08/22/12 00:01	08/22/12 23:11	1
4-Bromofluorobenzene (Surr)	90		72 - 126	08/22/12 00:01	08/22/12 23:11	1

Client Sample ID: GP-10-19

Lab Sample ID: 480-24074-3

Date Collected: 08/16/12 10:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 87.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	4.0	J	5.7	1.1	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
1,3,5-Trimethylbenzene	ND		5.7	0.37	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
4-Isopropyltoluene	ND		5.7	0.46	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
Benzene	ND		5.7	0.28	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
Ethylbenzene	ND		5.7	0.40	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
Isopropylbenzene	ND		5.7	0.86	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
Methyl tert-butyl ether	ND		5.7	0.56	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
m-Xylene & p-Xylene	1.2	J	11	0.96	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
Naphthalene	3.1	J	5.7	0.77	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
n-Butylbenzene	ND		5.7	0.50	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
N-Propylbenzene	3.8	J	5.7	0.46	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
o-Xylene	ND		5.7	0.75	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
sec-Butylbenzene	ND		5.7	0.50	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
tert-Butylbenzene	ND		5.7	0.60	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
Toluene	ND		5.7	0.43	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1
Xylenes, Total	1.2	J	11	0.96	ug/Kg	☼	08/22/12 00:01	08/22/12 23:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		64 - 126	08/22/12 00:01	08/22/12 23:36	1
Toluene-d8 (Surr)	85		71 - 125	08/22/12 00:01	08/22/12 23:36	1
4-Bromofluorobenzene (Surr)	87		72 - 126	08/22/12 00:01	08/22/12 23:36	1

Client Sample Results

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-10-24

Lab Sample ID: 480-24074-4

Date Collected: 08/16/12 10:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 82.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	3.0	J B	6.1	1.2	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
1,3,5-Trimethylbenzene	ND		6.1	0.39	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
4-Isopropyltoluene	1.7	J	6.1	0.49	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
Benzene	ND		6.1	0.30	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
Ethylbenzene	ND		6.1	0.42	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
Isopropylbenzene	ND		6.1	0.91	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
Methyl tert-butyl ether	ND		6.1	0.60	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
m-Xylene & p-Xylene	1.9	J B	12	1.0	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
Naphthalene	ND		6.1	0.81	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
n-Butylbenzene	5.7	J	6.1	0.53	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
N-Propylbenzene	3.3	J	6.1	0.48	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
o-Xylene	ND		6.1	0.79	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
sec-Butylbenzene	1.9	J	6.1	0.53	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
tert-Butylbenzene	ND		6.1	0.63	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
Toluene	ND		6.1	0.46	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
Xylenes, Total	1.9	J B	12	1.0	ug/Kg	☼	08/20/12 22:02	08/21/12 17:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		64 - 126				08/20/12 22:02	08/21/12 17:37	1
Toluene-d8 (Surr)	104		71 - 125				08/20/12 22:02	08/21/12 17:37	1
4-Bromofluorobenzene (Surr)	115		72 - 126				08/20/12 22:02	08/21/12 17:37	1

Client Sample ID: GP-11-15

Lab Sample ID: 480-24074-5

Date Collected: 08/16/12 11:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	25	B	5.9	1.1	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
1,3,5-Trimethylbenzene	ND		5.9	0.38	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
4-Isopropyltoluene	7.1		5.9	0.48	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
Benzene	ND		5.9	0.29	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
Ethylbenzene	ND		5.9	0.41	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
Isopropylbenzene	ND		5.9	0.89	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
Methyl tert-butyl ether	ND		5.9	0.58	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
m-Xylene & p-Xylene	1.6	J B	12	1.0	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
Naphthalene	ND		5.9	0.79	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
n-Butylbenzene	21		5.9	0.52	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
N-Propylbenzene	20		5.9	0.47	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
o-Xylene	ND		5.9	0.77	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
sec-Butylbenzene	8.5		5.9	0.52	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
tert-Butylbenzene	ND		5.9	0.62	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
Toluene	ND		5.9	0.45	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
Xylenes, Total	1.6	J B	12	1.0	ug/Kg	☼	08/20/12 22:02	08/21/12 18:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		64 - 126				08/20/12 22:02	08/21/12 18:03	1
Toluene-d8 (Surr)	103		71 - 125				08/20/12 22:02	08/21/12 18:03	1
4-Bromofluorobenzene (Surr)	116		72 - 126				08/20/12 22:02	08/21/12 18:03	1

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-11-18

Lab Sample ID: 480-24074-6

Date Collected: 08/16/12 11:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	69	B	5.9	1.1	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
1,3,5-Trimethylbenzene	ND		5.9	0.38	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
4-Isopropyltoluene	1.4	J	5.9	0.47	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
Benzene	ND		5.9	0.29	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
Ethylbenzene	ND		5.9	0.40	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
Isopropylbenzene	1.2	J	5.9	0.88	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
Methyl tert-butyl ether	ND		5.9	0.58	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
m-Xylene & p-Xylene	2.3	J B	12	0.99	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
Naphthalene	9.9	B	5.9	0.79	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
n-Butylbenzene	5.3	J	5.9	0.51	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
N-Propylbenzene	7.5		5.9	0.47	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
o-Xylene	ND		5.9	0.77	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
sec-Butylbenzene	ND		5.9	0.51	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
tert-Butylbenzene	ND		5.9	0.61	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
Toluene	ND		5.9	0.44	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
Xylenes, Total	2.3	J B	12	0.99	ug/Kg	☼	08/20/12 22:02	08/21/12 18:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		64 - 126				08/20/12 22:02	08/21/12 18:41	1
Toluene-d8 (Surr)	103		71 - 125				08/20/12 22:02	08/21/12 18:41	1
4-Bromofluorobenzene (Surr)	115		72 - 126				08/20/12 22:02	08/21/12 18:41	1

Client Sample ID: GP-12-15

Lab Sample ID: 480-24074-7

Date Collected: 08/16/12 12:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 87.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	29	B	5.7	1.1	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
1,3,5-Trimethylbenzene	6.4		5.7	0.37	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
4-Isopropyltoluene	1.2	J	5.7	0.45	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
Benzene	ND		5.7	0.28	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
Ethylbenzene	ND		5.7	0.39	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
Isopropylbenzene	ND		5.7	0.86	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
Methyl tert-butyl ether	ND		5.7	0.56	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
m-Xylene & p-Xylene	3.8	J B	11	0.95	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
Naphthalene	110	B	5.7	0.76	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
n-Butylbenzene	4.9	J	5.7	0.49	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
N-Propylbenzene	3.4	J	5.7	0.45	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
o-Xylene	1.5	J	5.7	0.74	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
sec-Butylbenzene	ND		5.7	0.49	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
tert-Butylbenzene	ND		5.7	0.59	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
Toluene	ND		5.7	0.43	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
Xylenes, Total	5.3	J B	11	0.95	ug/Kg	☼	08/20/12 22:02	08/21/12 19:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		64 - 126				08/20/12 22:02	08/21/12 19:07	1
Toluene-d8 (Surr)	103		71 - 125				08/20/12 22:02	08/21/12 19:07	1
4-Bromofluorobenzene (Surr)	116		72 - 126				08/20/12 22:02	08/21/12 19:07	1

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-12-20

Lab Sample ID: 480-24074-8

Date Collected: 08/16/12 12:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 85.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	3.6	J B	5.7	1.1	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
1,3,5-Trimethylbenzene	ND		5.7	0.37	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
4-Isopropyltoluene	ND		5.7	0.46	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
Benzene	ND		5.7	0.28	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
Ethylbenzene	ND		5.7	0.40	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
Isopropylbenzene	ND		5.7	0.87	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
Methyl tert-butyl ether	ND		5.7	0.56	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
m-Xylene & p-Xylene	3.6	J B	11	0.96	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
Naphthalene	7.0	B	5.7	0.77	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
n-Butylbenzene	1.4	J	5.7	0.50	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
N-Propylbenzene	1.0	J	5.7	0.46	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
o-Xylene	ND		5.7	0.75	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
sec-Butylbenzene	ND		5.7	0.50	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
tert-Butylbenzene	ND		5.7	0.60	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
Toluene	ND		5.7	0.43	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
Xylenes, Total	3.6	J B	11	0.96	ug/Kg	☼	08/20/12 22:02	08/21/12 19:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		64 - 126				08/20/12 22:02	08/21/12 19:32	1
Toluene-d8 (Surr)	100		71 - 125				08/20/12 22:02	08/21/12 19:32	1
4-Bromofluorobenzene (Surr)	114		72 - 126				08/20/12 22:02	08/21/12 19:32	1

Client Sample ID: GP-14-11

Lab Sample ID: 480-24074-9

Date Collected: 08/16/12 13:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 82.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	26	J	28	5.4	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
1,3,5-Trimethylbenzene	ND		28	1.8	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
4-Isopropyltoluene	31		28	2.3	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
Benzene	ND		28	1.4	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
Ethylbenzene	ND		28	1.9	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
Isopropylbenzene	17	J	28	4.2	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
Methyl tert-butyl ether	ND		28	2.8	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
m-Xylene & p-Xylene	ND		56	4.7	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
Naphthalene	ND		28	3.8	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
n-Butylbenzene	ND		28	2.4	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
N-Propylbenzene	18	J	28	2.2	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
o-Xylene	ND		28	3.7	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
sec-Butylbenzene	ND		28	2.4	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
tert-Butylbenzene	ND		28	2.9	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
Toluene	ND		28	2.1	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
Xylenes, Total	ND		56	4.7	ug/Kg	☼	08/23/12 12:01	08/23/12 15:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		64 - 126				08/23/12 12:01	08/23/12 15:48	1
Toluene-d8 (Surr)	96		71 - 125				08/23/12 12:01	08/23/12 15:48	1
4-Bromofluorobenzene (Surr)	87		72 - 126				08/23/12 12:01	08/23/12 15:48	1

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-14-13

Lab Sample ID: 480-24074-10

Date Collected: 08/16/12 13:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	2200		120	39	ug/Kg	☼	08/22/12 18:31	08/23/12 08:03	1
Benzene	ND		120	5.6	ug/Kg	☼	08/22/12 18:31	08/23/12 08:03	1
Isopropylbenzene	8700		120	17	ug/Kg	☼	08/22/12 18:31	08/23/12 08:03	1
Methyl tert-butyl ether	ND		120	44	ug/Kg	☼	08/22/12 18:31	08/23/12 08:03	1
sec-Butylbenzene	3200		120	43	ug/Kg	☼	08/22/12 18:31	08/23/12 08:03	1
tert-Butylbenzene	ND		120	32	ug/Kg	☼	08/22/12 18:31	08/23/12 08:03	1
Toluene	ND		120	31	ug/Kg	☼	08/22/12 18:31	08/23/12 08:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	197	X	53 - 146	08/22/12 18:31	08/23/12 08:03	1
Toluene-d8 (Surr)	47	X	50 - 149	08/22/12 18:31	08/23/12 08:03	1
4-Bromofluorobenzene (Surr)	47	X	49 - 148	08/22/12 18:31	08/23/12 08:03	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	290000		4600	1300	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40
1,3,5-Trimethylbenzene	81000		4600	1400	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40
Ethylbenzene	26000		4600	1300	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40
m-Xylene & p-Xylene	140000		9300	2600	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40
Naphthalene	49000		4600	1600	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40
n-Butylbenzene	22000		4600	1400	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40
N-Propylbenzene	39000		4600	1200	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40
o-Xylene	26000		4600	600	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40
Xylenes, Total	170000		9300	780	ug/Kg	☼	08/22/12 18:31	08/24/12 19:21	40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	253	X	53 - 146	08/22/12 18:31	08/24/12 19:21	40
Toluene-d8 (Surr)	106		50 - 149	08/22/12 18:31	08/24/12 19:21	40
4-Bromofluorobenzene (Surr)	101		49 - 148	08/22/12 18:31	08/24/12 19:21	40

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		3900	46	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Acenaphthylene	ND		3900	32	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Anthracene	ND		3900	100	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Benz(a)anthracene	ND		3900	67	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Benzo(a)pyrene	ND *		3900	94	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Benzo(b)fluoranthene	ND *		3900	76	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Benzo(g,h,i)perylene	ND *		3900	47	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Benzo(k)fluoranthene	ND *		3900	43	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Chrysene	ND		3900	39	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Dibenz(a,h)anthracene	ND *		3900	46	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Fluoranthene	ND		3900	57	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Fluorene	ND		3900	90	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Indeno(1,2,3-c,d)pyrene	ND *		3900	110	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Naphthalene	10000		3900	65	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Phenanthrene	ND		3900	82	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20
Pyrene	ND		3900	25	ug/Kg	☼	08/22/12 14:59	08/31/12 13:51	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		34 - 132	08/22/12 14:59	08/31/12 13:51	20
2-Fluorobiphenyl	90		37 - 120	08/22/12 14:59	08/31/12 13:51	20

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-14-13

Date Collected: 08/16/12 13:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-10

Matrix: Solid

Percent Solids: 84.6

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl-d14	119		65 - 153	08/22/12 14:59	08/31/12 13:51	20

Client Sample ID: GP-14-16

Date Collected: 08/16/12 13:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-11

Matrix: Solid

Percent Solids: 82.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1100		120	33	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
1,3,5-Trimethylbenzene	300		120	36	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
4-Isopropyltoluene	ND		120	40	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
Benzene	ND		120	5.8	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
Ethylbenzene	ND		120	35	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
Isopropylbenzene	ND		120	18	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
Methyl tert-butyl ether	ND		120	45	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
m-Xylene & p-Xylene	100	J	240	66	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
Naphthalene	530		120	40	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
n-Butylbenzene	160		120	35	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
N-Propylbenzene	120		120	31	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
o-Xylene	ND		120	16	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
sec-Butylbenzene	ND		120	44	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
tert-Butylbenzene	ND		120	33	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
Toluene	ND		120	32	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1
Xylenes, Total	100	J	240	20	ug/Kg	☼	08/23/12 19:10	08/24/12 06:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		53 - 146	08/23/12 19:10	08/24/12 06:19	1
Toluene-d8 (Surr)	103		50 - 149	08/23/12 19:10	08/24/12 06:19	1
4-Bromofluorobenzene (Surr)	102		49 - 148	08/23/12 19:10	08/24/12 06:19	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1000	12	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Acenaphthylene	ND		1000	8.3	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Anthracene	ND		1000	26	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Benz(a)anthracene	ND		1000	18	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Benzo(a)pyrene	ND	*	1000	25	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Benzo(b)fluoranthene	ND	*	1000	20	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Benzo(g,h,i)perylene	ND	*	1000	12	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Benzo(k)fluoranthene	ND	*	1000	11	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Chrysene	ND		1000	10	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Dibenz(a,h)anthracene	ND	*	1000	12	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Fluoranthene	ND		1000	15	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Fluorene	ND		1000	24	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Indeno(1,2,3-c,d)pyrene	ND	*	1000	28	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Naphthalene	ND		1000	17	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Phenanthrene	ND		1000	21	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5
Pyrene	ND		1000	6.6	ug/Kg	☼	08/22/12 14:59	08/31/12 14:15	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	70		34 - 132	08/22/12 14:59	08/31/12 14:15	5

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-14-16

Date Collected: 08/16/12 13:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-11

Matrix: Solid

Percent Solids: 82.1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	80		37 - 120	08/22/12 14:59	08/31/12 14:15	5
p-Terphenyl-d14	117		65 - 153	08/22/12 14:59	08/31/12 14:15	5

Client Sample ID: GP-15-13

Date Collected: 08/16/12 14:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-12

Matrix: Solid

Percent Solids: 84.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	3600		110	39	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
Benzene	ND		110	5.5	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
Ethylbenzene	6700		110	33	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
Isopropylbenzene	11000		110	17	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
Methyl tert-butyl ether	ND		110	43	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
o-Xylene	9800		110	15	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
sec-Butylbenzene	4300		110	42	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
tert-Butylbenzene	ND		110	32	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
Toluene	ND		110	31	ug/Kg	☼	08/22/12 18:31	08/23/12 08:24	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	168	X	53 - 146	08/22/12 18:31	08/23/12 08:24	1			
Toluene-d8 (Surr)	41	X	50 - 149	08/22/12 18:31	08/23/12 08:24	1			
4-Bromofluorobenzene (Surr)	42	X	49 - 148	08/22/12 18:31	08/23/12 08:24	1			

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	220000		2300	640	ug/Kg	☼	08/22/12 18:31	08/23/12 20:38	20
1,3,5-Trimethylbenzene	69000		2300	690	ug/Kg	☼	08/22/12 18:31	08/23/12 20:38	20
m-Xylene & p-Xylene	74000		4600	1300	ug/Kg	☼	08/22/12 18:31	08/23/12 20:38	20
Naphthalene	31000		2300	780	ug/Kg	☼	08/22/12 18:31	08/23/12 20:38	20
n-Butylbenzene	23000		2300	670	ug/Kg	☼	08/22/12 18:31	08/23/12 20:38	20
N-Propylbenzene	29000		2300	600	ug/Kg	☼	08/22/12 18:31	08/23/12 20:38	20
Xylenes, Total	95000		4600	390	ug/Kg	☼	08/22/12 18:31	08/23/12 20:38	20
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	135		53 - 146	08/22/12 18:31	08/23/12 20:38	20			
Toluene-d8 (Surr)	88		50 - 149	08/22/12 18:31	08/23/12 20:38	20			
4-Bromofluorobenzene (Surr)	87		49 - 148	08/22/12 18:31	08/23/12 20:38	20			

Client Sample ID: GP-16-13

Date Collected: 08/16/12 15:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-13

Matrix: Solid

Percent Solids: 84.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	1600		120	39	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
Benzene	ND		120	5.6	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
Isopropylbenzene	3500		120	17	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
Methyl tert-butyl ether	ND		120	44	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
Naphthalene	11000		120	39	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
n-Butylbenzene	7800		120	34	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
N-Propylbenzene	9900		120	30	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-16-13

Lab Sample ID: 480-24074-13

Date Collected: 08/16/12 15:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	11000		120	15	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
sec-Butylbenzene	1600		120	43	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
tert-Butylbenzene	ND		120	32	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
Toluene	3200		120	31	ug/Kg	☼	08/22/12 18:31	08/23/12 08:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	152	X	53 - 146				08/22/12 18:31	08/23/12 08:45	1
Toluene-d8 (Surr)	69		50 - 149				08/22/12 18:31	08/23/12 08:45	1
4-Bromofluorobenzene (Surr)	68		49 - 148				08/22/12 18:31	08/23/12 08:45	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	69000		1200	320	ug/Kg	☼	08/22/12 18:31	08/23/12 20:59	10
1,3,5-Trimethylbenzene	21000		1200	350	ug/Kg	☼	08/22/12 18:31	08/23/12 20:59	10
Ethylbenzene	19000		1200	340	ug/Kg	☼	08/22/12 18:31	08/23/12 20:59	10
m-Xylene & p-Xylene	69000		2300	640	ug/Kg	☼	08/22/12 18:31	08/23/12 20:59	10
Xylenes, Total	88000		2300	190	ug/Kg	☼	08/22/12 18:31	08/23/12 20:59	10

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		980	11	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Acenaphthylene	ND		980	8.0	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Anthracene	ND		980	25	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Benz(a)anthracene	ND		980	17	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Benzo(a)pyrene	ND *		980	23	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Benzo(b)fluoranthene	ND *		980	19	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Benzo(g,h,i)perylene	ND *		980	12	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Benzo(k)fluoranthene	ND *		980	11	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Chrysene	ND		980	9.7	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Dibenz(a,h)anthracene	ND *		980	11	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Fluoranthene	ND		980	14	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Fluorene	ND		980	22	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Indeno(1,2,3-c,d)pyrene	ND *		980	27	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Naphthalene	530	J	980	16	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Phenanthrene	ND		980	20	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Pyrene	ND		980	6.3	ug/Kg	☼	08/22/12 14:59	08/31/12 14:39	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		34 - 132				08/22/12 14:59	08/31/12 14:39	5
2-Fluorobiphenyl	84		37 - 120				08/22/12 14:59	08/31/12 14:39	5
p-Terphenyl-d14	114		65 - 153				08/22/12 14:59	08/31/12 14:39	5

Client Sample ID: GP-16-16

Lab Sample ID: 480-24074-14

Date Collected: 08/16/12 15:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	4.8	J	6.0	1.1	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
1,3,5-Trimethylbenzene	ND		6.0	0.38	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
4-Isopropyltoluene	ND		6.0	0.48	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
Benzene	ND		6.0	0.29	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-16-16

Lab Sample ID: 480-24074-14

Date Collected: 08/16/12 15:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		6.0	0.41	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
Isopropylbenzene	ND		6.0	0.90	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
Methyl tert-butyl ether	ND		6.0	0.59	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
m-Xylene & p-Xylene	ND		12	1.0	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
Naphthalene	35		6.0	0.80	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
n-Butylbenzene	0.54	J	6.0	0.52	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
N-Propylbenzene	ND		6.0	0.48	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
o-Xylene	ND		6.0	0.78	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
sec-Butylbenzene	ND		6.0	0.52	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
tert-Butylbenzene	ND		6.0	0.62	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
Toluene	ND		6.0	0.45	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
Xylenes, Total	ND		12	1.0	ug/Kg	☼	08/23/12 12:01	08/23/12 16:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	73		64 - 126				08/23/12 12:01	08/23/12 16:14	1
Toluene-d8 (Surr)	83		71 - 125				08/23/12 12:01	08/23/12 16:14	1
4-Bromofluorobenzene (Surr)	78		72 - 126				08/23/12 12:01	08/23/12 16:14	1

Client Sample ID: GP-17-13

Lab Sample ID: 480-24074-15

Date Collected: 08/16/12 16:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	110		5.8	1.1	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
1,3,5-Trimethylbenzene	26		5.8	0.37	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
4-Isopropyltoluene	1.9	J	5.8	0.47	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
Benzene	ND		5.8	0.28	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
Ethylbenzene	12		5.8	0.40	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
Isopropylbenzene	2.4	J	5.8	0.88	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
Methyl tert-butyl ether	ND		5.8	0.57	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
m-Xylene & p-Xylene	55		12	0.98	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
Naphthalene	140		5.8	0.78	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
n-Butylbenzene	5.7	J	5.8	0.51	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
N-Propylbenzene	10		5.8	0.46	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
o-Xylene	13		5.8	0.76	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
sec-Butylbenzene	ND		5.8	0.51	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
tert-Butylbenzene	ND		5.8	0.60	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
Toluene	3.7	J	5.8	0.44	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
Xylenes, Total	68		12	0.98	ug/Kg	☼	08/20/12 22:02	08/23/12 01:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		64 - 126				08/20/12 22:02	08/23/12 01:17	1
Toluene-d8 (Surr)	87		71 - 125				08/20/12 22:02	08/23/12 01:17	1
4-Bromofluorobenzene (Surr)	88		72 - 126				08/20/12 22:02	08/23/12 01:17	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		200	2.3	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Acenaphthylene	ND		200	1.6	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Anthracene	ND		200	5.1	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Benz(a)anthracene	ND		200	3.4	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-17-13

Lab Sample ID: 480-24074-15

Date Collected: 08/16/12 16:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo(a)pyrene	ND	*	200	4.8	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Benzo(b)fluoranthene	ND	*	200	3.9	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Benzo(g,h,i)perylene	ND	*	200	2.4	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Benzo(k)fluoranthene	ND	*	200	2.2	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Chrysene	ND		200	2.0	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Dibenz(a,h)anthracene	ND	*	200	2.3	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Fluoranthene	ND		200	2.9	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Fluorene	ND		200	4.6	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Indeno(1,2,3-c,d)pyrene	ND	*	200	5.5	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Naphthalene	66	J	200	3.3	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Phenanthrene	ND		200	4.2	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Pyrene	ND		200	1.3	ug/Kg	☼	08/22/12 14:59	08/31/12 13:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	76		34 - 132				08/22/12 14:59	08/31/12 13:03	1
2-Fluorobiphenyl	75		37 - 120				08/22/12 14:59	08/31/12 13:03	1
p-Terphenyl-d14	121		65 - 153				08/22/12 14:59	08/31/12 13:03	1

Client Sample ID: GP-17-16

Lab Sample ID: 480-24074-16

Date Collected: 08/16/12 16:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 86.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	2.0	J	5.9	1.1	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
1,3,5-Trimethylbenzene	2.9	J	5.9	0.38	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
4-Isopropyltoluene	ND		5.9	0.47	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
Benzene	ND		5.9	0.29	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
Ethylbenzene	0.71	J	5.9	0.40	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
Isopropylbenzene	ND		5.9	0.88	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
Methyl tert-butyl ether	ND		5.9	0.58	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
m-Xylene & p-Xylene	1.8	J	12	0.99	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
Naphthalene	9.6		5.9	0.79	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
n-Butylbenzene	ND		5.9	0.51	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
N-Propylbenzene	ND		5.9	0.47	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
o-Xylene	ND		5.9	0.77	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
sec-Butylbenzene	ND		5.9	0.51	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
tert-Butylbenzene	ND		5.9	0.61	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
Toluene	ND		5.9	0.44	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
Xylenes, Total	1.8	J	12	0.99	ug/Kg	☼	08/22/12 00:01	08/23/12 01:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		64 - 126				08/22/12 00:01	08/23/12 01:43	1
Toluene-d8 (Surr)	87		71 - 125				08/22/12 00:01	08/23/12 01:43	1
4-Bromofluorobenzene (Surr)	87		72 - 126				08/22/12 00:01	08/23/12 01:43	1

Client Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-14 LF COMP

Lab Sample ID: 480-24074-17

Date Collected: 08/16/12 13:00

Matrix: Solid

Date Received: 08/16/12 19:50

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0041	mg/L			08/23/12 04:02	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		66 - 137					08/23/12 04:02	10
Toluene-d8 (Surr)	116		71 - 126					08/23/12 04:02	10
4-Bromofluorobenzene (Surr)	113		73 - 120					08/23/12 04:02	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.077		0.0050	0.0030	mg/L		08/22/12 10:30	08/22/12 21:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	500	B	119	33.3	mg/Kg	✱	08/23/12 15:30	08/23/12 15:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>176.0		50.0	50.0	Degrees F			08/27/12 16:01	1
pH	7.48		0.100	0.100	SU			08/23/12 23:50	1

Client Sample ID: GP-16 LF COMP

Lab Sample ID: 480-24074-18

Date Collected: 08/16/12 15:00

Matrix: Solid

Date Received: 08/16/12 19:50

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0041	mg/L			08/23/12 04:25	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		66 - 137					08/23/12 04:25	10
Toluene-d8 (Surr)	112		71 - 126					08/23/12 04:25	10
4-Bromofluorobenzene (Surr)	112		73 - 120					08/23/12 04:25	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.012		0.0050	0.0030	mg/L		08/22/12 10:30	08/22/12 21:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	609	B	117	32.8	mg/Kg	✱	08/23/12 15:30	08/23/12 15:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>176.0		50.0	50.0	Degrees F			08/27/12 17:03	1
pH	8.20		0.100	0.100	SU			08/23/12 23:50	1

Client Sample ID: GP-17 LF COMP

Lab Sample ID: 480-24074-19

Date Collected: 08/16/12 16:00

Matrix: Solid

Date Received: 08/16/12 19:50

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0041	mg/L			08/23/12 04:47	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		66 - 137					08/23/12 04:47	10
Toluene-d8 (Surr)	114		71 - 126					08/23/12 04:47	10

Client Sample Results

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-17 LF COMP

Lab Sample ID: 480-24074-19

Date Collected: 08/16/12 16:00

Matrix: Solid

Date Received: 08/16/12 19:50

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		73 - 120		08/23/12 04:47	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0050	0.0030	mg/L		08/22/12 10:30	08/22/12 21:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	ND		115	32.2	mg/Kg	✱	08/23/12 15:30	08/23/12 15:30	1
Flashpoint	>176.0		50.0	50.0	Degrees F			08/27/12 18:06	1
pH	8.48		0.100	0.100	SU			08/23/12 23:50	1



Surrogate Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (53-146)	TOL (50-149)	BFB (49-148)
480-24074-1	GP-8-16	143	74	72
480-24074-10	GP-14-13	197 X	47 X	47 X
480-24074-10 - DL	GP-14-13	253 X	106	101
480-24074-11	GP-14-16	108	103	102
480-24074-12	GP-15-13	168 X	41 X	42 X
480-24074-12 - DL	GP-15-13	135	88	87
480-24074-13	GP-16-13	152 X	69	68
LCS 480-77770/1-A	Lab Control Sample	107	111	109
LCS 480-77965/1-A	Lab Control Sample	122	114	110
MB 480-77770/2-A	Method Blank	106	112	109
MB 480-77965/2-A	Method Blank	118	115	112

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (64-126)	TOL (71-125)	BFB (72-126)
480-24074-2	GP-10-13	81	86	90
480-24074-3	GP-10-19	80	85	87
480-24074-4	GP-10-24	86	104	115
480-24074-5	GP-11-15	86	103	116
480-24074-6	GP-11-18	88	103	115
480-24074-7	GP-12-15	87	103	116
480-24074-8	GP-12-20	83	100	114
480-24074-9	GP-14-11	118	96	87
480-24074-14	GP-16-16	73	83	78
480-24074-15	GP-17-13	89	87	88
480-24074-16	GP-17-16	80	87	87
LCS 480-77484/26	Lab Control Sample	89	106	114
LCS 480-77846/4	Lab Control Sample	82	89	90
LCS 480-77848/6	Lab Control Sample	75	86	81
MB 480-77484/27	Method Blank	78	105	112
MB 480-77846/5	Method Blank	79	88	88
MB 480-77848/7	Method Blank	74	86	80

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

Surrogate Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (66-137)	TOL (71-126)	BFB (73-120)
LCS 480-77773/4	Lab Control Sample	103	113	108
MB 480-77773/5	Method Blank	109	114	108

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (66-137)	TOL (71-126)	BFB (73-120)
480-24074-17	GP-14 LF COMP	109	116	113
480-24074-18	GP-16 LF COMP	105	112	112
480-24074-19	GP-17 LF COMP	108	114	109
LB 480-77533/1-A LB	Method Blank	108	113	107

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		NBZ (34-132)	FBP (37-120)	TPH (65-153)
480-24074-1	GP-8-16	61	73	96
480-24074-10	GP-14-13	75	90	119
480-24074-11	GP-14-16	70	80	117
480-24074-13	GP-16-13	75	84	114
480-24074-15	GP-17-13	76	75	121
LCS 480-77744/2-A	Lab Control Sample	100	102	151
MB 480-77744/1-A	Method Blank	84	85	138

Surrogate Legend

NBZ = Nitrobenzene-d5
 FBP = 2-Fluorobiphenyl
 TPH = p-Terphenyl-d14

QC Sample Results

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-77484/27

Matrix: Solid

Analysis Batch: 77484

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1.28	J	5.0	0.96	ug/Kg			08/21/12 15:42	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg			08/21/12 15:42	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg			08/21/12 15:42	1
Benzene	ND		5.0	0.25	ug/Kg			08/21/12 15:42	1
Ethylbenzene	1.05	J	5.0	0.35	ug/Kg			08/21/12 15:42	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg			08/21/12 15:42	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg			08/21/12 15:42	1
m-Xylene & p-Xylene	1.29	J	10	0.84	ug/Kg			08/21/12 15:42	1
Naphthalene	2.41	J	5.0	0.67	ug/Kg			08/21/12 15:42	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg			08/21/12 15:42	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg			08/21/12 15:42	1
o-Xylene	ND		5.0	0.65	ug/Kg			08/21/12 15:42	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg			08/21/12 15:42	1
tert-Butylbenzene	ND		5.0	0.52	ug/Kg			08/21/12 15:42	1
Toluene	ND		5.0	0.38	ug/Kg			08/21/12 15:42	1
Xylenes, Total	1.29	J	10	0.84	ug/Kg			08/21/12 15:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	78		64 - 126		08/21/12 15:42	1
Toluene-d8 (Surr)	105		71 - 125		08/21/12 15:42	1
4-Bromofluorobenzene (Surr)	112		72 - 126		08/21/12 15:42	1

Lab Sample ID: LCS 480-77484/26

Matrix: Solid

Analysis Batch: 77484

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	50.0	47.3		ug/Kg		95	74 - 120
Benzene	50.0	54.9		ug/Kg		110	79 - 127
Ethylbenzene	50.0	50.2		ug/Kg		100	80 - 120
Methyl tert-butyl ether	50.0	52.9		ug/Kg		106	63 - 125
m-Xylene & p-Xylene	100	102		ug/Kg		102	70 - 130
o-Xylene	50.0	52.0		ug/Kg		104	70 - 130
Toluene	50.0	51.2		ug/Kg		102	74 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		64 - 126
Toluene-d8 (Surr)	106		71 - 125
4-Bromofluorobenzene (Surr)	114		72 - 126

Lab Sample ID: MB 480-77770/2-A

Matrix: Solid

Analysis Batch: 77772

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 77770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		98	27	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
1,3,5-Trimethylbenzene	ND		98	30	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
4-Isopropyltoluene	ND		98	33	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
Benzene	ND		98	4.7	ug/Kg		08/22/12 18:31	08/23/12 01:15	1

QC Sample Results

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-77770/2-A

Matrix: Solid

Analysis Batch: 77772

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 77770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		98	29	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
Isopropylbenzene	ND		98	15	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
Methyl tert-butyl ether	ND		98	37	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
m-Xylene & p-Xylene	ND		200	54	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
Naphthalene	ND		98	33	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
n-Butylbenzene	ND		98	29	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
N-Propylbenzene	ND		98	26	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
o-Xylene	ND		98	13	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
sec-Butylbenzene	ND		98	36	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
tert-Butylbenzene	ND		98	27	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
Toluene	ND		98	26	ug/Kg		08/22/12 18:31	08/23/12 01:15	1
Xylenes, Total	ND		200	16	ug/Kg		08/22/12 18:31	08/23/12 01:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		53 - 146	08/22/12 18:31	08/23/12 01:15	1
Toluene-d8 (Surr)	112		50 - 149	08/22/12 18:31	08/23/12 01:15	1
4-Bromofluorobenzene (Surr)	109		49 - 148	08/22/12 18:31	08/23/12 01:15	1

Lab Sample ID: LCS 480-77770/1-A

Matrix: Solid

Analysis Batch: 77772

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 77770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	2470	2890		ug/Kg		117	
Benzene	2470	2920		ug/Kg		118	75 - 131
Ethylbenzene	2470	2860		ug/Kg		116	
Methyl tert-butyl ether	2470	2680		ug/Kg		109	
m-Xylene & p-Xylene	4940	5610		ug/Kg		113	
o-Xylene	2470	2850		ug/Kg		115	
Toluene	2470	2880		ug/Kg		116	76 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		53 - 146
Toluene-d8 (Surr)	111		50 - 149
4-Bromofluorobenzene (Surr)	109		49 - 148

Lab Sample ID: MB 480-77773/5

Matrix: Solid

Analysis Batch: 77773

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010	0.00041	mg/L			08/22/12 22:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		66 - 137		08/22/12 22:35	1
Toluene-d8 (Surr)	114		71 - 126		08/22/12 22:35	1
4-Bromofluorobenzene (Surr)	108		73 - 120		08/22/12 22:35	1

QC Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-77773/4

Matrix: Solid

Analysis Batch: 77773

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.0257		mg/L		103	71 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		66 - 137
Toluene-d8 (Surr)	113		71 - 126
4-Bromofluorobenzene (Surr)	108		73 - 120

Lab Sample ID: MB 480-77846/5

Matrix: Solid

Analysis Batch: 77846

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg			08/22/12 22:00	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg			08/22/12 22:00	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg			08/22/12 22:00	1
Benzene	ND		5.0	0.25	ug/Kg			08/22/12 22:00	1
Ethylbenzene	ND		5.0	0.35	ug/Kg			08/22/12 22:00	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg			08/22/12 22:00	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg			08/22/12 22:00	1
m-Xylene & p-Xylene	ND		10	0.84	ug/Kg			08/22/12 22:00	1
Naphthalene	ND		5.0	0.67	ug/Kg			08/22/12 22:00	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg			08/22/12 22:00	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg			08/22/12 22:00	1
o-Xylene	ND		5.0	0.65	ug/Kg			08/22/12 22:00	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg			08/22/12 22:00	1
tert-Butylbenzene	ND		5.0	0.52	ug/Kg			08/22/12 22:00	1
Toluene	ND		5.0	0.38	ug/Kg			08/22/12 22:00	1
Xylenes, Total	ND		10	0.84	ug/Kg			08/22/12 22:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		64 - 126		08/22/12 22:00	1
Toluene-d8 (Surr)	88		71 - 125		08/22/12 22:00	1
4-Bromofluorobenzene (Surr)	88		72 - 126		08/22/12 22:00	1

Lab Sample ID: LCS 480-77846/4

Matrix: Solid

Analysis Batch: 77846

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	50.0	48.0		ug/Kg		96	74 - 120
Benzene	50.0	48.3		ug/Kg		97	79 - 127
Ethylbenzene	50.0	47.7		ug/Kg		95	80 - 120
Methyl tert-butyl ether	50.0	50.5		ug/Kg		101	63 - 125
m-Xylene & p-Xylene	100	95.9		ug/Kg		96	70 - 130
o-Xylene	50.0	48.3		ug/Kg		97	70 - 130
Toluene	50.0	47.6		ug/Kg		95	74 - 128

QC Sample Results

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-77846/4
Matrix: Solid
Analysis Batch: 77846

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	82		64 - 126
Toluene-d8 (Surr)	89		71 - 125
4-Bromofluorobenzene (Surr)	90		72 - 126

Lab Sample ID: MB 480-77848/7
Matrix: Solid
Analysis Batch: 77848

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg			08/23/12 11:52	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg			08/23/12 11:52	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg			08/23/12 11:52	1
Benzene	ND		5.0	0.25	ug/Kg			08/23/12 11:52	1
Ethylbenzene	ND		5.0	0.35	ug/Kg			08/23/12 11:52	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg			08/23/12 11:52	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg			08/23/12 11:52	1
m-Xylene & p-Xylene	ND		10	0.84	ug/Kg			08/23/12 11:52	1
Naphthalene	ND		5.0	0.67	ug/Kg			08/23/12 11:52	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg			08/23/12 11:52	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg			08/23/12 11:52	1
o-Xylene	ND		5.0	0.65	ug/Kg			08/23/12 11:52	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg			08/23/12 11:52	1
tert-Butylbenzene	ND		5.0	0.52	ug/Kg			08/23/12 11:52	1
Toluene	ND		5.0	0.38	ug/Kg			08/23/12 11:52	1
Xylenes, Total	ND		10	0.84	ug/Kg			08/23/12 11:52	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	74		64 - 126		08/23/12 11:52	1
Toluene-d8 (Surr)	86		71 - 125		08/23/12 11:52	1
4-Bromofluorobenzene (Surr)	80		72 - 126		08/23/12 11:52	1

Lab Sample ID: LCS 480-77848/6
Matrix: Solid
Analysis Batch: 77848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,2,4-Trimethylbenzene	50.0	49.6		ug/Kg		99	74 - 120
Benzene	50.0	46.1		ug/Kg		92	79 - 127
Ethylbenzene	50.0	48.2		ug/Kg		96	80 - 120
Methyl tert-butyl ether	50.0	47.2		ug/Kg		94	63 - 125
m-Xylene & p-Xylene	100	96.9		ug/Kg		97	70 - 130
o-Xylene	50.0	48.8		ug/Kg		98	70 - 130
Toluene	50.0	48.2		ug/Kg		96	74 - 128

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	75		64 - 126
Toluene-d8 (Surr)	86		71 - 125
4-Bromofluorobenzene (Surr)	81		72 - 126

QC Sample Results

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-77965/2-A

Matrix: Solid

Analysis Batch: 77964

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 77965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		99	28	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
1,3,5-Trimethylbenzene	ND		99	30	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
4-Isopropyltoluene	ND		99	33	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
Benzene	ND		99	4.7	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
Ethylbenzene	ND		99	29	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
Isopropylbenzene	ND		99	15	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
Methyl tert-butyl ether	ND		99	37	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
m-Xylene & p-Xylene	ND		200	55	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
Naphthalene	ND		99	33	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
n-Butylbenzene	ND		99	29	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
N-Propylbenzene	ND		99	26	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
o-Xylene	ND		99	13	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
sec-Butylbenzene	ND		99	36	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
tert-Butylbenzene	ND		99	27	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
Toluene	ND		99	26	ug/Kg		08/23/12 19:10	08/24/12 00:23	1
Xylenes, Total	ND		200	17	ug/Kg		08/23/12 19:10	08/24/12 00:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		53 - 146	08/23/12 19:10	08/24/12 00:23	1
Toluene-d8 (Surr)	115		50 - 149	08/23/12 19:10	08/24/12 00:23	1
4-Bromofluorobenzene (Surr)	112		49 - 148	08/23/12 19:10	08/24/12 00:23	1

Lab Sample ID: LCS 480-77965/1-A

Matrix: Solid

Analysis Batch: 77964

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 77965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	2490	2800		ug/Kg		113	
Benzene	2490	2500		ug/Kg		101	75 - 131
Ethylbenzene	2490	2830		ug/Kg		114	
Methyl tert-butyl ether	2490	2460		ug/Kg		99	
m-Xylene & p-Xylene	4970	5620		ug/Kg		113	
o-Xylene	2490	2630		ug/Kg		106	
Toluene	2490	2710		ug/Kg		109	76 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	122		53 - 146
Toluene-d8 (Surr)	114		50 - 149
4-Bromofluorobenzene (Surr)	110		49 - 148

Lab Sample ID: LB 480-77533/1-A LB

Matrix: Solid

Analysis Batch: 77773

Client Sample ID: Method Blank

Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0041	mg/L			08/23/12 03:16	10

QC Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 480-77533/1-A LB
Matrix: Solid
Analysis Batch: 77773

Client Sample ID: Method Blank
Prep Type: TCLP

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		66 - 137		08/23/12 03:16	10
Toluene-d8 (Surr)	113		71 - 126		08/23/12 03:16	10
4-Bromofluorobenzene (Surr)	107		73 - 120		08/23/12 03:16	10

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-77744/1-A
Matrix: Solid
Analysis Batch: 78780

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77744

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	1.9	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Acenaphthylene	ND		170	1.4	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Anthracene	ND		170	4.2	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Benz(a)anthracene	ND		170	2.9	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Benzo(a)pyrene	ND		170	4.0	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Benzo(b)fluoranthene	ND		170	3.2	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Benzo(g,h,i)perylene	ND		170	2.0	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Benzo(k)fluoranthene	ND		170	1.8	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Chrysene	ND		170	1.7	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Dibenz(a,h)anthracene	ND		170	2.0	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Fluoranthene	ND		170	2.4	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Fluorene	ND		170	3.8	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Indeno(1,2,3-c,d)pyrene	ND		170	4.6	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Naphthalene	ND		170	2.8	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Phenanthrene	ND		170	3.5	ug/Kg		08/22/12 14:58	08/30/12 14:43	1
Pyrene	ND		170	1.1	ug/Kg		08/22/12 14:58	08/30/12 14:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	84		34 - 132	08/22/12 14:58	08/30/12 14:43	1
2-Fluorobiphenyl	85		37 - 120	08/22/12 14:58	08/30/12 14:43	1
p-Terphenyl-d14	138		65 - 153	08/22/12 14:58	08/30/12 14:43	1

Lab Sample ID: LCS 480-77744/2-A
Matrix: Solid
Analysis Batch: 78780

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77744

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	3280	3510		ug/Kg		107	53 - 120
Acenaphthylene	3280	3540		ug/Kg		108	58 - 121
Anthracene	3280	3540		ug/Kg		108	62 - 129
Benz(a)anthracene	3280	4170		ug/Kg		127	65 - 133
Benzo(a)pyrene	3280	6030	E *	ug/Kg		184	64 - 127
Benzo(b)fluoranthene	3280	5320	E *	ug/Kg		162	64 - 135
Benzo(g,h,i)perylene	3280	7080	E *	ug/Kg		216	50 - 152
Benzo(k)fluoranthene	3280	6150	E *	ug/Kg		187	58 - 138
Chrysene	3280	4230		ug/Kg		129	64 - 131
Dibenz(a,h)anthracene	3280	6940	E *	ug/Kg		211	54 - 148
Fluoranthene	3280	3460		ug/Kg		105	62 - 131

QC Sample Results

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-77744/2-A
Matrix: Solid
Analysis Batch: 78780

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77744

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	3280	3550		ug/Kg		108	63 - 126
Indeno(1,2,3-c,d)pyrene	3280	7070	E *	ug/Kg		215	56 - 149
Naphthalene	3280	3120		ug/Kg		95	46 - 120
Phenanthrene	3280	3500		ug/Kg		107	60 - 130
Pyrene	3280	4330		ug/Kg		132	51 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	100		34 - 132
2-Fluorobiphenyl	102		37 - 120
p-Terphenyl-d14	151		65 - 153

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-77671/2-A
Matrix: Solid
Analysis Batch: 77826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77671

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0050	0.0030	mg/L		08/22/12 10:30	08/22/12 21:13	1

Lab Sample ID: LCS 480-77671/3-A
Matrix: Solid
Analysis Batch: 77826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77671

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	0.989		mg/L		99	80 - 120

Lab Sample ID: LB 480-77529/1-B LB
Matrix: Solid
Analysis Batch: 77826

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 77671

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0050	0.0030	mg/L		08/22/12 10:30	08/22/12 21:10	1

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 480-78368/1
Matrix: Solid
Analysis Batch: 78368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Flashpoint	81.0	80.00		Degrees F		99	97.5 - 102.5

Lab Sample ID: 480-24074-19 DU
Matrix: Solid
Analysis Batch: 78368

Client Sample ID: GP-17 LF COMP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Flashpoint	>176.0		>176.0		Degrees F		NC	10

QC Sample Results

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 480-77978/1-A
 Matrix: Solid
 Analysis Batch: 77979

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 77978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	39.06	J	97.6	27.3	mg/Kg		08/23/12 15:30	08/23/12 15:30	1

Lab Sample ID: LCS 480-77978/2-A
 Matrix: Solid
 Analysis Batch: 77979

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 77978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oil & Grease	992	677.4		mg/Kg		68	29 - 139

Lab Sample ID: 480-24074-19 DU
 Matrix: Solid
 Analysis Batch: 77979

Client Sample ID: GP-17 LF COMP
 Prep Type: Total/NA
 Prep Batch: 77978

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Oil & Grease	ND		ND		mg/Kg	✱	NC	18

Method: 9045C - pH

Lab Sample ID: LCS 480-77989/1
 Matrix: Solid
 Analysis Batch: 77989

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.000		SU		100	99 - 101

QC Association Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

GC/MS VOA

Prep Batch: 77407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-4	GP-10-24	Total/NA	Solid	5035	
480-24074-5	GP-11-15	Total/NA	Solid	5035	
480-24074-6	GP-11-18	Total/NA	Solid	5035	
480-24074-7	GP-12-15	Total/NA	Solid	5035	
480-24074-8	GP-12-20	Total/NA	Solid	5035	
480-24074-15	GP-17-13	Total/NA	Solid	5035	

Analysis Batch: 77484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-4	GP-10-24	Total/NA	Solid	8260B	77407
480-24074-5	GP-11-15	Total/NA	Solid	8260B	77407
480-24074-6	GP-11-18	Total/NA	Solid	8260B	77407
480-24074-7	GP-12-15	Total/NA	Solid	8260B	77407
480-24074-8	GP-12-20	Total/NA	Solid	8260B	77407
LCS 480-77484/26	Lab Control Sample	Total/NA	Solid	8260B	
MB 480-77484/27	Method Blank	Total/NA	Solid	8260B	

Leach Batch: 77533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	TCLP	Solid	1311	
480-24074-18	GP-16 LF COMP	TCLP	Solid	1311	
480-24074-19	GP-17 LF COMP	TCLP	Solid	1311	
LB 480-77533/1-A LB	Method Blank	TCLP	Solid	1311	

Prep Batch: 77592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-2	GP-10-13	Total/NA	Solid	5035	
480-24074-3	GP-10-19	Total/NA	Solid	5035	
480-24074-16	GP-17-16	Total/NA	Solid	5035	

Prep Batch: 77770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-1	GP-8-16	Total/NA	Solid	5035	
480-24074-10	GP-14-13	Total/NA	Solid	5035	
480-24074-10 - DL	GP-14-13	Total/NA	Solid	5035	
480-24074-12	GP-15-13	Total/NA	Solid	5035	
480-24074-12 - DL	GP-15-13	Total/NA	Solid	5035	
480-24074-13	GP-16-13	Total/NA	Solid	5035	
480-24074-13 - DL	GP-16-13	Total/NA	Solid	5035	
LCS 480-77770/1-A	Lab Control Sample	Total/NA	Solid	5035	
MB 480-77770/2-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 77772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-1	GP-8-16	Total/NA	Solid	8260B	77770
480-24074-10	GP-14-13	Total/NA	Solid	8260B	77770
480-24074-12	GP-15-13	Total/NA	Solid	8260B	77770
480-24074-13	GP-16-13	Total/NA	Solid	8260B	77770
LCS 480-77770/1-A	Lab Control Sample	Total/NA	Solid	8260B	77770
MB 480-77770/2-A	Method Blank	Total/NA	Solid	8260B	77770

QC Association Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

GC/MS VOA (Continued)

Analysis Batch: 77773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	TCLP	Solid	8260B	77533
480-24074-18	GP-16 LF COMP	TCLP	Solid	8260B	77533
480-24074-19	GP-17 LF COMP	TCLP	Solid	8260B	77533
LB 480-77533/1-A LB	Method Blank	TCLP	Solid	8260B	77533
LCS 480-77773/4	Lab Control Sample	Total/NA	Solid	8260B	
MB 480-77773/5	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 77846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-2	GP-10-13	Total/NA	Solid	8260B	77592
480-24074-3	GP-10-19	Total/NA	Solid	8260B	77592
480-24074-15	GP-17-13	Total/NA	Solid	8260B	77407
480-24074-16	GP-17-16	Total/NA	Solid	8260B	77592
LCS 480-77846/4	Lab Control Sample	Total/NA	Solid	8260B	
MB 480-77846/5	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 77848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-9	GP-14-11	Total/NA	Solid	8260B	77892
480-24074-14	GP-16-16	Total/NA	Solid	8260B	77892
LCS 480-77848/6	Lab Control Sample	Total/NA	Solid	8260B	
MB 480-77848/7	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 77871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-12 - DL	GP-15-13	Total/NA	Solid	8260B	77770
480-24074-13 - DL	GP-16-13	Total/NA	Solid	8260B	77770

Prep Batch: 77892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-9	GP-14-11	Total/NA	Solid	5035	
480-24074-14	GP-16-16	Total/NA	Solid	5035	

Analysis Batch: 77964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-11	GP-14-16	Total/NA	Solid	8260B	77965
LCS 480-77965/1-A	Lab Control Sample	Total/NA	Solid	8260B	77965
MB 480-77965/2-A	Method Blank	Total/NA	Solid	8260B	77965

Prep Batch: 77965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-11	GP-14-16	Total/NA	Solid	5035	
LCS 480-77965/1-A	Lab Control Sample	Total/NA	Solid	5035	
MB 480-77965/2-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 78059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-10 - DL	GP-14-13	Total/NA	Solid	8260B	77770

QC Association Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

GC/MS Semi VOA

Prep Batch: 77744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-1	GP-8-16	Total/NA	Solid	3550B	
480-24074-10	GP-14-13	Total/NA	Solid	3550B	
480-24074-11	GP-14-16	Total/NA	Solid	3550B	
480-24074-13	GP-16-13	Total/NA	Solid	3550B	
480-24074-15	GP-17-13	Total/NA	Solid	3550B	
LCS 480-77744/2-A	Lab Control Sample	Total/NA	Solid	3550B	
MB 480-77744/1-A	Method Blank	Total/NA	Solid	3550B	

Analysis Batch: 78780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-77744/2-A	Lab Control Sample	Total/NA	Solid	8270C	77744
MB 480-77744/1-A	Method Blank	Total/NA	Solid	8270C	77744

Analysis Batch: 78938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-1	GP-8-16	Total/NA	Solid	8270C	77744
480-24074-10	GP-14-13	Total/NA	Solid	8270C	77744
480-24074-11	GP-14-16	Total/NA	Solid	8270C	77744
480-24074-13	GP-16-13	Total/NA	Solid	8270C	77744
480-24074-15	GP-17-13	Total/NA	Solid	8270C	77744

Metals

Leach Batch: 77529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	TCLP	Solid	1311	
480-24074-18	GP-16 LF COMP	TCLP	Solid	1311	
480-24074-19	GP-17 LF COMP	TCLP	Solid	1311	
LB 480-77529/1-B LB	Method Blank	TCLP	Solid	1311	

Prep Batch: 77671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	TCLP	Solid	3010A	77529
480-24074-18	GP-16 LF COMP	TCLP	Solid	3010A	77529
480-24074-19	GP-17 LF COMP	TCLP	Solid	3010A	77529
LB 480-77529/1-B LB	Method Blank	TCLP	Solid	3010A	77529
LCS 480-77671/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 480-77671/2-A	Method Blank	Total/NA	Solid	3010A	

Analysis Batch: 77826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	TCLP	Solid	6010B	77671
480-24074-18	GP-16 LF COMP	TCLP	Solid	6010B	77671
480-24074-19	GP-17 LF COMP	TCLP	Solid	6010B	77671
LB 480-77529/1-B LB	Method Blank	TCLP	Solid	6010B	77671
LCS 480-77671/3-A	Lab Control Sample	Total/NA	Solid	6010B	77671
MB 480-77671/2-A	Method Blank	Total/NA	Solid	6010B	77671

QC Association Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

General Chemistry

Analysis Batch: 77325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-1	GP-8-16	Total/NA	Solid	Moisture	
480-24074-2	GP-10-13	Total/NA	Solid	Moisture	
480-24074-3	GP-10-19	Total/NA	Solid	Moisture	
480-24074-4	GP-10-24	Total/NA	Solid	Moisture	
480-24074-5	GP-11-15	Total/NA	Solid	Moisture	
480-24074-6	GP-11-18	Total/NA	Solid	Moisture	
480-24074-7	GP-12-15	Total/NA	Solid	Moisture	
480-24074-8	GP-12-20	Total/NA	Solid	Moisture	
480-24074-9	GP-14-11	Total/NA	Solid	Moisture	
480-24074-10	GP-14-13	Total/NA	Solid	Moisture	
480-24074-11	GP-14-16	Total/NA	Solid	Moisture	
480-24074-12	GP-15-13	Total/NA	Solid	Moisture	
480-24074-13	GP-16-13	Total/NA	Solid	Moisture	
480-24074-14	GP-16-16	Total/NA	Solid	Moisture	
480-24074-15	GP-17-13	Total/NA	Solid	Moisture	
480-24074-16	GP-17-16	Total/NA	Solid	Moisture	

Prep Batch: 77978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	Total/NA	Solid	1664A	
480-24074-18	GP-16 LF COMP	Total/NA	Solid	1664A	
480-24074-19	GP-17 LF COMP	Total/NA	Solid	1664A	
480-24074-19 DU	GP-17 LF COMP	Total/NA	Solid	1664A	
LCS 480-77978/2-A	Lab Control Sample	Total/NA	Solid	1664A	
MB 480-77978/1-A	Method Blank	Total/NA	Solid	1664A	

Analysis Batch: 77979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	Total/NA	Solid	1664A	77978
480-24074-18	GP-16 LF COMP	Total/NA	Solid	1664A	77978
480-24074-19	GP-17 LF COMP	Total/NA	Solid	1664A	77978
480-24074-19 DU	GP-17 LF COMP	Total/NA	Solid	1664A	77978
LCS 480-77978/2-A	Lab Control Sample	Total/NA	Solid	1664A	77978
MB 480-77978/1-A	Method Blank	Total/NA	Solid	1664A	77978

Analysis Batch: 77989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	Total/NA	Solid	9045C	
480-24074-18	GP-16 LF COMP	Total/NA	Solid	9045C	
480-24074-19	GP-17 LF COMP	Total/NA	Solid	9045C	
LCS 480-77989/1	Lab Control Sample	Total/NA	Solid	9045C	

Analysis Batch: 78368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	Total/NA	Solid	1010	
480-24074-18	GP-16 LF COMP	Total/NA	Solid	1010	
480-24074-19	GP-17 LF COMP	Total/NA	Solid	1010	
480-24074-19 DU	GP-17 LF COMP	Total/NA	Solid	1010	
LCS 480-78368/1	Lab Control Sample	Total/NA	Solid	1010	

QC Association Summary

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

General Chemistry (Continued)

Analysis Batch: 78608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-24074-17	GP-14 LF COMP	Total/NA	Solid	Moisture	
480-24074-18	GP-16 LF COMP	Total/NA	Solid	Moisture	
480-24074-19	GP-17 LF COMP	Total/NA	Solid	Moisture	

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Lab Chronicle

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-8-16

Date Collected: 08/16/12 09:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-1

Matrix: Solid

Percent Solids: 84.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.08 g	10 mL	77770	08/22/12 18:31	RL	TAL BUF
Total/NA	Analysis	8260B		1			77772	08/23/12 07:41	LH	TAL BUF
Total/NA	Prep	3550B			+30.66 g	1 mL	77744	08/22/12 14:59	DE	TAL BUF
Total/NA	Analysis	8270C		5			78938	08/31/12 13:27	RMM	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-10-13

Date Collected: 08/16/12 10:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-2

Matrix: Solid

Percent Solids: 83.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.07 g	5 mL	77592	08/22/12 00:01	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77846	08/22/12 23:11	JMB	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-10-19

Date Collected: 08/16/12 10:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-3

Matrix: Solid

Percent Solids: 87.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	77592	08/22/12 00:01	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77846	08/22/12 23:36	JMB	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-10-24

Date Collected: 08/16/12 10:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-4

Matrix: Solid

Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	77407	08/20/12 22:02	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77484	08/21/12 17:37	CDC	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-11-15

Date Collected: 08/16/12 11:00

Date Received: 08/16/12 19:50

Lab Sample ID: 480-24074-5

Matrix: Solid

Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	77407	08/20/12 22:02	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77484	08/21/12 18:03	CDC	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Lab Chronicle

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-11-18

Lab Sample ID: 480-24074-6

Date Collected: 08/16/12 11:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	77407	08/20/12 22:02	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77484	08/21/12 18:41	CDC	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-12-15

Lab Sample ID: 480-24074-7

Date Collected: 08/16/12 12:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.07 g	5 mL	77407	08/20/12 22:02	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77484	08/21/12 19:07	CDC	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-12-20

Lab Sample ID: 480-24074-8

Date Collected: 08/16/12 12:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.07 g	5 mL	77407	08/20/12 22:02	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77484	08/21/12 19:32	CDC	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-14-11

Lab Sample ID: 480-24074-9

Date Collected: 08/16/12 13:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 82.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1.08 g	5 mL	77892	08/23/12 12:01	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77848	08/23/12 15:48	JMB	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-14-13

Lab Sample ID: 480-24074-10

Date Collected: 08/16/12 13:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.1 g	10 mL	77770	08/22/12 18:31	RL	TAL BUF
Total/NA	Analysis	8260B		1			77772	08/23/12 08:03	LH	TAL BUF
Total/NA	Prep	5035	DL		5.1 g	10 mL	77770	08/22/12 18:31	RL	TAL BUF
Total/NA	Analysis	8260B	DL	40			78059	08/24/12 19:21	RL	TAL BUF
Total/NA	Prep	3550B			+30.71 g	1 mL	77744	08/22/12 14:59	DE	TAL BUF
Total/NA	Analysis	8270C		20			78938	08/31/12 13:51	RMM	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Lab Chronicle

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-14-16

Lab Sample ID: 480-24074-11

Date Collected: 08/16/12 13:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 82.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.08 g	10 mL	77965	08/23/12 19:10	RL	TAL BUF
Total/NA	Analysis	8260B		1			77964	08/24/12 06:19	LH	TAL BUF
Total/NA	Prep	3550B			+30.23 g	1 mL	77744	08/22/12 14:59	DE	TAL BUF
Total/NA	Analysis	8270C		5			78938	08/31/12 14:15	RMM	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-15-13

Lab Sample ID: 480-24074-12

Date Collected: 08/16/12 14:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.14 g	10 mL	77770	08/22/12 18:31	RL	TAL BUF
Total/NA	Analysis	8260B		1			77772	08/23/12 08:24	LH	TAL BUF
Total/NA	Prep	5035	DL		5.14 g	10 mL	77770	08/22/12 18:31	RL	TAL BUF
Total/NA	Analysis	8260B	DL	20			77871	08/23/12 20:38	ND	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-16-13

Lab Sample ID: 480-24074-13

Date Collected: 08/16/12 15:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.09 g	10 mL	77770	08/22/12 18:31	RL	TAL BUF
Total/NA	Analysis	8260B		1			77772	08/23/12 08:45	LH	TAL BUF
Total/NA	Prep	5035	DL		5.09 g	10 mL	77770	08/22/12 18:31	RL	TAL BUF
Total/NA	Analysis	8260B	DL	10			77871	08/23/12 20:59	ND	TAL BUF
Total/NA	Prep	3550B			+30.63 g	1 mL	77744	08/22/12 14:59	DE	TAL BUF
Total/NA	Analysis	8270C		5			78938	08/31/12 14:39	RMM	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-16-16

Lab Sample ID: 480-24074-14

Date Collected: 08/16/12 15:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	77892	08/23/12 12:01	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77848	08/23/12 16:14	JMB	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Lab Chronicle

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-17-13

Lab Sample ID: 480-24074-15

Date Collected: 08/16/12 16:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 84.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.1 g	5 mL	77407	08/20/12 22:02	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77846	08/23/12 01:17	JMB	TAL BUF
Total/NA	Prep	3550B			+30.18 g	1 mL	77744	08/22/12 14:59	DE	TAL BUF
Total/NA	Analysis	8270C		1			78938	08/31/12 13:03	RMM	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-17-16

Lab Sample ID: 480-24074-16

Date Collected: 08/16/12 16:00

Matrix: Solid

Date Received: 08/16/12 19:50

Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.91 g	5 mL	77592	08/22/12 00:01	JMB	TAL BUF
Total/NA	Analysis	8260B		1			77846	08/23/12 01:43	JMB	TAL BUF
Total/NA	Analysis	Moisture		1			77325	08/20/12 12:36	ZR	TAL BUF

Client Sample ID: GP-14 LF COMP

Lab Sample ID: 480-24074-17

Date Collected: 08/16/12 13:00

Matrix: Solid

Date Received: 08/16/12 19:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			25.36 g	500 mL	77533	08/21/12 14:01	TR	TAL BUF
TCLP	Analysis	8260B		10	5 mL	5 mL	77773	08/23/12 04:02	LH	TAL BUF
TCLP	Leach	1311			100.29 g	2000 mL	77529	08/21/12 13:40	TR	TAL BUF
TCLP	Prep	3010A			50 mL	50 mL	77671	08/22/12 10:30	SS	TAL BUF
TCLP	Analysis	6010B		1			77826	08/22/12 21:23	AH	TAL BUF
Total/NA	Analysis	1664A		1			77979	08/23/12 15:30	ML	TAL BUF
Total/NA	Prep	1664A			5.0144 g	5 g	77978	08/23/12 15:30	ML	TAL BUF
Total/NA	Analysis	9045C		1	20 g	20 mL	77989	08/23/12 23:50	JB	TAL BUF
Total/NA	Analysis	1010		1			78368	08/27/12 16:01	ML	TAL BUF
Total/NA	Analysis	Moisture		1			78608	08/29/12 11:01	KK	TAL BUF

Client Sample ID: GP-16 LF COMP

Lab Sample ID: 480-24074-18

Date Collected: 08/16/12 15:00

Matrix: Solid

Date Received: 08/16/12 19:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			25.31 g	500 mL	77533	08/21/12 14:01	TR	TAL BUF
TCLP	Analysis	8260B		10	5 mL	5 mL	77773	08/23/12 04:25	LH	TAL BUF
TCLP	Leach	1311			100.03 g	2000 mL	77529	08/21/12 13:40	TR	TAL BUF
TCLP	Prep	3010A			50 mL	50 mL	77671	08/22/12 10:30	SS	TAL BUF
TCLP	Analysis	6010B		1			77826	08/22/12 21:26	AH	TAL BUF
Total/NA	Analysis	1664A		1			77979	08/23/12 15:30	ML	TAL BUF
Total/NA	Prep	1664A			5.0225 g	5 g	77978	08/23/12 15:30	ML	TAL BUF
Total/NA	Analysis	9045C		1	20 g	20 mL	77989	08/23/12 23:50	JB	TAL BUF

Lab Chronicle

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Client Sample ID: GP-16 LF COMP

Lab Sample ID: 480-24074-18

Date Collected: 08/16/12 15:00

Matrix: Solid

Date Received: 08/16/12 19:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1010		1			78368	08/27/12 17:03	ML	TAL BUF
Total/NA	Analysis	Moisture		1			78608	08/29/12 11:01	KK	TAL BUF

Client Sample ID: GP-17 LF COMP

Lab Sample ID: 480-24074-19

Date Collected: 08/16/12 16:00

Matrix: Solid

Date Received: 08/16/12 19:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			25.64 g	500 mL	77533	08/21/12 14:01	TR	TAL BUF
TCLP	Analysis	8260B		10	5 mL	5 mL	77773	08/23/12 04:47	LH	TAL BUF
TCLP	Leach	1311			100.59 g	2000 mL	77529	08/21/12 13:40	TR	TAL BUF
TCLP	Prep	3010A			50 mL	50 mL	77671	08/22/12 10:30	SS	TAL BUF
TCLP	Analysis	6010B		1			77826	08/22/12 21:33	AH	TAL BUF
Total/NA	Analysis	1664A		1			77979	08/23/12 15:30	ML	TAL BUF
Total/NA	Prep	1664A			5.0799 g	5 g	77978	08/23/12 15:30	ML	TAL BUF
Total/NA	Analysis	9045C		1	20 g	20 mL	77989	08/23/12 23:50	JB	TAL BUF
Total/NA	Analysis	1010		1			78368	08/27/12 18:06	ML	TAL BUF
Total/NA	Analysis	Moisture		1			78608	08/29/12 11:01	KK	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Iyer Environmental Group, LLC
 Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAC	9	1169CA	09-30-12
Connecticut	State Program	1	PH-0568	09-30-12
Florida	NELAC	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-13
Georgia	State Program	4	956	03-31-12
Illinois	NELAC	5	200003	09-30-12
Iowa	State Program	7	374	03-01-13
Kansas	NELAC	7	E-10187	01-31-13
Kentucky	State Program	4	90029	12-31-12
Kentucky (UST)	State Program	4	30	04-01-13
Louisiana	NELAC	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-12
Maryland	State Program	3	294	03-31-13
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13
Minnesota	NELAC	5	036-999-337	12-31-12
New Hampshire	NELAC	1	2973	09-11-12
New Hampshire	NELAC	1	2337	11-17-12
New Jersey	NELAC	2	NY455	06-30-13
New York	NELAC	2	10026	03-31-13
North Dakota	State Program	8	R-176	03-31-13
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAC	10	NY200003	06-09-13
Pennsylvania	NELAC	3	68-00281	07-31-13
Tennessee	State Program	4	TN02970	04-01-13
Texas	NELAC	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAC	3	460185	09-14-12
Washington	State Program	10	C784	02-10-13
West Virginia DEP	State Program	3	252	09-30-12
Wisconsin	State Program	5	998310390	08-31-12



Method Summary

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
6010B	Metals (ICP)	SW846	TAL BUF
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL BUF
1664A	HEM and SGT-HEM	1664A	TAL BUF
9045C	pH	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



Sample Summary

Client: Iyer Environmental Group, LLC
Project/Site: 77 W. Huron St., NY

TestAmerica Job ID: 480-24074-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-24074-1	GP-8-16	Solid	08/16/12 09:00	08/16/12 19:50
480-24074-2	GP-10-13	Solid	08/16/12 10:00	08/16/12 19:50
480-24074-3	GP-10-19	Solid	08/16/12 10:00	08/16/12 19:50
480-24074-4	GP-10-24	Solid	08/16/12 10:00	08/16/12 19:50
480-24074-5	GP-11-15	Solid	08/16/12 11:00	08/16/12 19:50
480-24074-6	GP-11-18	Solid	08/16/12 11:00	08/16/12 19:50
480-24074-7	GP-12-15	Solid	08/16/12 12:00	08/16/12 19:50
480-24074-8	GP-12-20	Solid	08/16/12 12:00	08/16/12 19:50
480-24074-9	GP-14-11	Solid	08/16/12 13:00	08/16/12 19:50
480-24074-10	GP-14-13	Solid	08/16/12 13:00	08/16/12 19:50
480-24074-11	GP-14-16	Solid	08/16/12 13:00	08/16/12 19:50
480-24074-12	GP-15-13	Solid	08/16/12 14:00	08/16/12 19:50
480-24074-13	GP-16-13	Solid	08/16/12 15:00	08/16/12 19:50
480-24074-14	GP-16-16	Solid	08/16/12 15:00	08/16/12 19:50
480-24074-15	GP-17-13	Solid	08/16/12 16:00	08/16/12 19:50
480-24074-16	GP-17-16	Solid	08/16/12 16:00	08/16/12 19:50
480-24074-17	GP-14 LF COMP	Solid	08/16/12 13:00	08/16/12 19:50
480-24074-18	GP-16 LF COMP	Solid	08/16/12 15:00	08/16/12 19:50
480-24074-19	GP-17 LF COMP	Solid	08/16/12 16:00	08/16/12 19:50

Chain of Custody Record

Temperature on Receipt _____
 Drinking Water? Yes No

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1/007)

Client: **Iyer Environmental Group**
 Address: **44 Rolling Hills Dr**
 City: **Orchard Park** State: **NY** Zip Code: **14127**
 Project Name and Location (State): **27 W Huron St (NY)**
 Contract/Purchase Order/Quote No. _____

Project Manager: **Dharma Iyer**
 Telephone Number (Area Code)/Fax Number: **(716) 662-4157 / (716) 662-2118**
 Site Contact: **R. Allen** Lab Contact: **M. Deyo**
 Current/Next Job Number: _____

Date: **Aug 16, 2012**
 Chain of Custody Number: **212451**
 Page **1** of **2**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt		
			Air	Soil	Water	Sludge	UNPC	H2SO4	HCl	HNO3			HOM	HOM ZINC
GP-8-16	Aug 16, 12	9:20A		✓								✓	STARS VOCs	
GP-10-13		10:00A		✓								✓	STARS VOCs	
GP-10-19		10:00A		✓								✓	STARS VOCs	
GP-10-24		10:00A		✓								✓	STARS VOCs	
GP-11-15		11:00A		✓								✓	STARS VOCs	
GP-11-18		11:00A		✓								✓	STARS VOCs	
GP-12-15		12:00P		✓								✓	STARS VOCs	
GP-12-20		12:00P		✓								✓	STARS VOCs	
GP-14-11		1:00P		✓								✓	STARS VOCs	
GP-14-13		1:00P		✓								✓	STARS VOCs	
GP-14-16		1:00P		✓								✓	STARS VOCs	
GP-15-13		2:00P		✓								✓	STARS VOCs	

Possible Hazard Identification:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Return to Client
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

Turn-Around Time Required

1. Relinquished By: **Richard Allen Jr** Date: **8/16/12** Time: **4:50**
 2. Relinquished By: _____ Date: _____ Time: _____
 3. Relinquished By: _____ Date: _____ Time: _____

Sample Disposal:
 Disposal By Lab Archive For _____ Months longer than 1 month)
 DC Requirements (Specify): _____

1. Received By: **[Signature]** Date: **8/16/12** Time: **4:50**
 2. Received By: _____ Date: _____ Time: _____
 3. Received By: _____ Date: _____ Time: _____

Comments: **21 #2**

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt? Yes No
 Drinking Water? Yes No

Chain of Custody Record

TAL-4124 (1/007)

Client: **Iyer Environmental Group**
 Address: **44 Rolling Hills Dr**
 City: **Orchard Park** State: **NY** Zip Code: **14127**
 Project Name and Location (State): **77 W Huron St (NY)**
 Contract/Purchase Order/Quote No.:

Project Manager: **Dharma Iyer**
 Telephone Number (Area Code)/Fax Number: **(716) 662-4157 / (716) 662-2110**
 Lab Contact: **R. Allen** Lab Contact: **M. Deyo**
 Current Mailing Number:

Date: **Aug 16, 2012**
 Lab Number: **212439**
 Page **2** of **2**

Special Instructions/
 Conditions of Receipt

Sample ID, No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt		
			SV	SP	SL	SR	HS20	HNO3	HNO2	HNO1				
GP-16-13	Aug 16, 12	3:00P	✓											
GP-16-16		3:00P	✓											
GP-17-13		4:00P	✓											
GP-17-16		4:00P	✓											
GP-14-13		1:00P	✓											4 oz jar
GP-14-16		1:00P	✓											4 oz jar
GP-16-13		3:00P	✓											4 oz jar
GP-17-13		4:00P	✓											4 oz jar

Possible Hazard Identification:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months longer than 1 month) GC Requirements (Specify)

Sample Disposal:
 Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other: _____

1. Relinquished By: **Richard C Allen Jr** Date: **8/16/12** Time: **19:50**
 2. Relinquished By: **Richard C Allen Jr** Date: **8/16/12** Time: **19:50**
 3. Relinquished By: _____ Date: _____ Time: _____

Comments: **22-1 #2**

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy



Login Sample Receipt Checklist

Client: Iyer Environmental Group, LLC

Job Number: 480-24074-1

Login Number: 24074

List Number: 1

Creator: Robitaille, Zach L

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	IYER
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	



BCP APPLICATION
SITE: 73-79 W Huron St, Buffalo, NY 14202

ATTACHMENT G-9
2013 Site Activity Report (Matrix)

May 17, 2013

Ms. Francine Gallego
NYSDEC Region 9
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203



Re: 1st Quarter 2013 Site Status Report
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York 14202
DUNS #0000-1289
NYSDEC Spill #11-06834
Matrix Project #10-043

Dear Ms. Gallego:

Matrix Environmental Technologies, Inc. (METI) is pleased to submit the 1st Quarter 2013 Site Status Report for the above referenced site. The enclosed report includes a summary of field activities completed for the months of January, February and March 2013. This work includes operation and maintenance of an oxygen injection system for the quarter and a groundwater sampling event performed on March 11, 2013. As indicated in the previous quarterly status report, injection of hydrated diammonium phosphate (DAP) occurred in February and March 2013 to stimulate bioremediation in groundwater. A total of 6 lbs of DAP was applied to all injection points across the 181 Delaware Avenue property during each injection event. Groundwater samples will be collected following each event from monitoring wells MW1R, MW4 and MW7 to evaluate future nutrient dosing. Results from the injection events will be summarized in the next quarterly monitoring report that will be submitted in July 2013.

Sincerely
Matrix Environmental Technologies Inc.

Steven L. Marchetti
Sr. Project Manager

Craig D. Zink, P.G., C.P.G.
Sr. project Manager

Enclosure
cc: Mrs. Kinyorda Sliwiak, Sunoco, Inc. (R&M)
Mr. Robert Knoer, Esq., The Knoer Group

QUARTERLY STATUS REPORT

1st Quarter 2013

March 2013

Former Sunoco DUNS #0000-1289

181 Delaware Avenue

Buffalo, New York

Matrix Env. Project #10-043

Matrix Env. Project Manager: Steve L. Marchetti

NYSDEC Spill #03-75208

NYSDEC Contact: Francine Gallego

REMEDATION INFORMATION:

Matrix Oxygen Injection System (U.S. Patent #5,874,001)

Equipment specifications: 80 SCFH, 32 point manifold

System Activated: October 14, 2011

Injection point specifications: IP1-IP27: 1-inch ID SCH40 PVC

System Operation: Oxygen Injection System			
	January 2013	February 2013	March 2013
Oxygen injection points operational	IP1-IP27	IP1-IP27	IP1-IP27
Operation efficiency (% run time)*	100%	100%	100%
Oxygen Purity (%)	80.5%	80.5%	76%
Injection cycle (minutes)	6 (Bank 1-3) 8 (Bank 4)	6 (Bank 1-3) 8 (Bank 4)	6 (Bank 1-3) 8 (Bank 4)
Injections per day	6	6	6
Average injection flow rate per point (scfh)	37	28	32
Avg. oxygen injected per point (lbs/day)	1.74	1.31	1.42

scfh = standard cubic feet per hour

psi = pounds per square inch

SYSTEM DESCRIPTION/PERFORMANCE

The oxygen injection system operated at 100% efficiency throughout the first quarter 2013. Data evaluation for system operation is completed continuously. The site data will continue to be evaluated to optimize system operation. The oxygen injection design calculations and dissolved oxygen saturation intervals are included in **Appendix B**.

SITE ACTIVITIES COMPLETED DURING PERIOD:

<u>Date</u>	<u>Activities Completed</u>
1/2/13	Oxygen injection system operational upon arrival. Performed bi-weekly system operation and maintenance check and collected site data. System evaluations included the collection of system component details and run hours, flow rates and pressures, oxygen purity and system maintenance data. Set IP1-24 to flow at 30 SCFH, IP25-26 to flow at 25 SCFH and IP27 to flow at 35 SCFH. Site data included the collection of wellhead space VOC concentrations and groundwater biogeochemistry data (dissolved oxygen concentrations, oxidation-reduction potential, pH and temperature) from accessible monitoring wells.
1/21/13	Oxygen injection system operational upon arrival. Performed monthly system operation and maintenance check. System evaluations included the collection of system component details and run hours, oxygen injection purity, flow rates and pressures, and system maintenance data. Set IP1-24 to flow at 30 SCFH, IP25-26 to flow at 25 SCFH and IP27 to flow at 35 SCFH. Site data included the collection of wellhead space VOC concentrations and groundwater biogeochemistry data from accessible monitoring wells.
2/4/13	Oxygen injection system operational upon arrival. Performed bi-weekly system operation and maintenance check and collected site data. System evaluations included the collection of system component details and run hours, flow rates and pressures, oxygen purity and system maintenance data. The system air dryer was deactivated until it can be replaced. Set IP1-24 to flow at 30 SCFH, IP25-26 to flow at 25 SCFH and IP27 to flow at 35 SCFH. Site data included the collection of wellhead space VOC concentrations and groundwater biogeochemistry data from selected monitoring wells
2/18/13	Oxygen injection system operational upon arrival. Performed monthly system operation and maintenance check. System evaluations included the collection of system component details and run hours, oxygen injection purity, flow rates and pressures, and system maintenance data. Set IP1-24 to flow at 30 SCFH, IP25-26 to flow at 25 SCFH and IP27 to flow at 35 SCFH. Site data included the collection of wellhead space VOC concentrations and groundwater biogeochemistry data from selected monitoring wells
2/26/13	Installed new air dryer for oxygen injection system. Injected 6 lbs of hydrated diammonium phosphate (DAP) to all injection points. Groundwater samples were collected from monitoring wells MW1R, MW4 and MW7 to evaluate future nutrient dosing.
3/11/13	Oxygen injection system operational upon arrival. Performed monthly system operation and maintenance check, site data collection and quarterly groundwater sampling. System evaluations included the collection of system component details and run hours, oxygen injection purity, flow rates and pressures, and system maintenance data. Groundwater monitoring included the collection of dissolved oxygen, oxidation reduction potential, pH, temperature and

groundwater samples for laboratory analysis for STARS list VOCs from all accessible monitoring wells. Site data included the collection of VOC concentrations with an organic vapor meter (OVM) from accessible monitoring wells. System evaluations included the collection of system component details and run hours, oxygen injection purity, flow rates and pressures, and system maintenance data. Set IP1-24 to flow at 30 SCFH, IP25-26 to flow at 25 SCFH and IP27 to flow at 35 SCFH.

3/28/13 Oxygen injection system operational upon arrival. Performed bi-weekly system operation and maintenance check. System evaluations included the collection of system component details and run hours, oxygen injection purity, flow rates and pressures, and system maintenance data. Set IP1-24 to flow at 30 SCFH, IP25-26 to flow at 25 SCFH and IP27 to flow at 35 SCFH. Injected 6 lbs of hydrated diammonium phosphate (DAP) to all injection points. Site data included the collection of VOC concentrations with an OVM from accessible monitoring wells. System evaluations included the collection of system component details and run hours, oxygen injection purity, flow rates and pressures, and system maintenance data. Groundwater samples were collected from monitoring wells MW1R, MW4 and MW7 to evaluate future nutrient dosing.

SITE HISTORY:

- 1889 through 1899 - The site was utilized as a private residence.
- 1925 - The site was utilized as a private residence. The land currently identified as 75 West Huron (adjoining property) was utilized as for petroleum product distribution.
- 1951 - The site was utilized as a filling station. Filling stations were located to the east at 75 West Huron, south across West Huron, and south west across Delaware and West Huron Streets.
- 1980 - Stuart Gellman purchased the property from Sun Oil, Inc.
- July/August, 2001 – an investigation was completed at 75-77 West Huron (adjoining property) and included sampling of the subsurface drainage sump installation, completion of six test pits, and review of Sanborn maps.
- June 2003 - GeoEnvironmental, Inc. (GZA) performed a subsurface investigation at 75 West Huron. Multiple VOCs and SVOCs were detected at concentrations above NYSDEC guidance values and resulted in the NYSDEC Spill #03-75208.
- September 2003 - Nature's Way Environmental Consultants (NWEC), at the request of NYSDEC, conducted a subsurface investigation at 181 Delaware. Multiple VOCs were detected above guidance values and NYSDEC concluded that impacts at 181 Delaware were the source of petroleum impacts on 75 West Delaware and that further delineation was necessary.

- May 2004 – March 2006 - GES supervised the installation of groundwater monitoring wells, soil and groundwater sampling and analysis, pilot testing for soil vapor extraction (SVE) and combined air sparging (AS)-SVE.
- January 2007 – Four air samples were collected at 73-79 West Huron Avenue (adjoining property); Laboratory analysis of the samples did not identify any impacts as a result of petroleum products at the adjacent garage.
- June 2007 - GES submitted a Remedial Action Plan (RAP) to the NYSDEC proposing the installation of an air-sparge and soil vapor extraction system to address petroleum impacts.
- October 10, 2007 - NYSDEC submitted written approval of the RAP.
- May-June 2008 - GES supervised the installation of air sparge wells SP-2 through SP-10, soil vapor extraction wells V-1 and V-2, and installation of AS/SVE process piping. While trenching, two 1,500-gallon steel underground storage tanks (USTs) were encountered and, subsequently, closed in place. Ground-penetrating radar (GPR) and apparent conductivity surveys were also completed.
- July 14, 2008 - The SVE system was activated.
- August 28, 2008 - The AS system was activated.
- September 23, 2008 – Hydrocarbon vapors were detected in the on-site building as well as three neighboring buildings. The AS system was deactivated and vapor mitigation activities were conducted at all affected buildings until ambient air PID readings in the buildings reduced to non-detect.
- November 30, 2009 - GES determined that the operation of the AS system had resulted in significant groundwater mounding. This mounding had effectively submerged the screen of the SVE wells, preventing adequate vapor recovery. As a result, the AS and SVE technologies, in their current condition, could not be utilized simultaneously without the risk of vapor intrusion in the subject site building and neighboring buildings.
- December 7, 2009 - Following NYSDEC approval, the SVE system was deactivated due to underperformance with respect to vapor recovery.
- March 2010 – GES supervised the installation of groundwater monitoring well MW-12, horizontal soil vapor extraction laterals HSVE-1 and HSVE-2, and completed a pilot test of in-situ technologies.
- March 2011 – METI supervised a Subsurface Investigation including the advancement of 18 soil borings, the installation of one (1) piezometer, and two (2) oxygen injection points. Details of the subsurface investigation were summarized in the Subsurface Investigation Results report¹.

¹ “Subsurface Investigation Results, Former Sunoco Station, 181 Delaware Avenue, Buffalo, New York” prepared for Sunoco, Inc. (R&M) by METI, dated May 5, 2011.

- March 16, 2011 to April 19, 2011 – Bio-Traps® samplers from Microbial Insights, Inc. were deployed in monitoring wells MW2, MW7 and MW10 for an assessment of biodegradation potential.
- May 31, 2011 to June 20, 2011 – An oxygen injection pilot test was completed at injection points IP1 and IP2. Pilot test and Bio-Trap® results were summarized in the Remedial Action Plan.
- July 1, 2011 to August 31, 2011 – A bioaugmentation and oxygen injection pilot test was completed in the vicinity of injection points IP1 and IP2 and monitoring well MW11. Details of the pilot test were summarized in the Remedial Action Plan Addendum.
- September 2, 2011 – The NYSDEC assigned a new spill number (11-06834) to 181 Delaware Avenue based on the results presented in the August 2011 Remedial Action Plan.
- October 3, 2011 to October 14, 2011 – Installation of a 32-point oxygen injection system and decommissioning of historical sparge and SVE wells on site.
- October 14, 2011 – A full scale oxygen injection system was activated at the site.
- October 19, 2011 to October 20, 2011 – Full scale bioaugmentation consisting of 13 biomass injections across the site.
- December 20, 2012 – Approximately 60 pounds of concentrated diammonium phosphate was hydrated and applied to injection points across the site. This process will continue on a monthly basis to stimulate bioremediation.

FUTURE ACTIVITIES:

- Quarterly groundwater compliance monitoring (March, June, September, December)
- Continuous operation of the oxygen injection system
- Bi-weekly system checks of the oxygen injection system
- Monthly collection of monitoring well DO/ORP/pH/temperature/%O₂/headspace OVM
- Monthly collection of vapor monitoring point headspace OVM/%O₂
- Quarterly collection of injection point DO/ORP/pH/temperature/headspace OVM
- Nutrient addition on a routine basis dependent on data
- Groundwater sampling from monitoring wells MW1R, 4 and 7 for BOD, HPC, ammonia, nitrate/nitrite and total phosphorus as needed.
- Evaluation of nutrient dosing as needed
- Annual completion of VOC concentration and DO plume maps in June

CLOSURE GOALS & OBJECTIVES

The primary remedial goal is to reduce VOC concentrations in groundwater and saturated soils to within acceptable limits for spill inactive status associated with the release at 181 Delaware Avenue.

The specific objectives to meet the remedial goal include:

1. Reduce total STARS list VOC concentrations in groundwater to within 1 mg/L.
2. Reduce total STARS list VOC concentrations in soil to levels that no longer contribute to groundwater VOCs exceeding 1 mg/L.

EXPOSURE ASSESSMENT:

Potential Receptors:

- Potential receptors from vapor intrusion include underground utility lines Delaware Avenue and West Huron Avenue, and occupants of on-site and neighboring buildings.

Water Supply:

- Municipal source.

GENERAL GEOLOGY:

Surficial soils at the site consist of mostly fine-to-medium-grained sand with less than 20% silt and clay and intermittent fill. Groundwater is present at approximately 7.5 to 10 feet below grade. Hydrocarbon impacts in soil and groundwater have been identified and are greatest in the vicinities of wells MW4, MW7, and MW11. Bedrock was not encountered during the March 2011 investigation completed by METI.

MONITORING:

Well Specifications:	MW1R, MW2 through MW-7, MW-9 through MW12: 4 -inch ID SCH40 PVC MW8: 2-inch SCH40 PVC
Gauging Frequency:	Quarterly
Groundwater Sampling Frequency and Analytical Method:	Quarterly, EPA Method 8260 STARS list
Laboratory Used:	VOC samples were submitted to Accutest Laboratories, NYSDOH ELAP #11791. Samples for the evaluation of nutrient dosing were submitted to Test America, NYSDEC ELAP #10026.

PERMIT/LEGAL INFORMATION

- None.

LIST OF ATTACHMENTS

- Figure 1: Groundwater Elevations & Quality Summary
- Figure 2: Monitoring Well Dissolved Oxygen Data
- Figure 3: Oxygen Injection System Layout
- Figure 4: Piping & Instrumentation Diagram

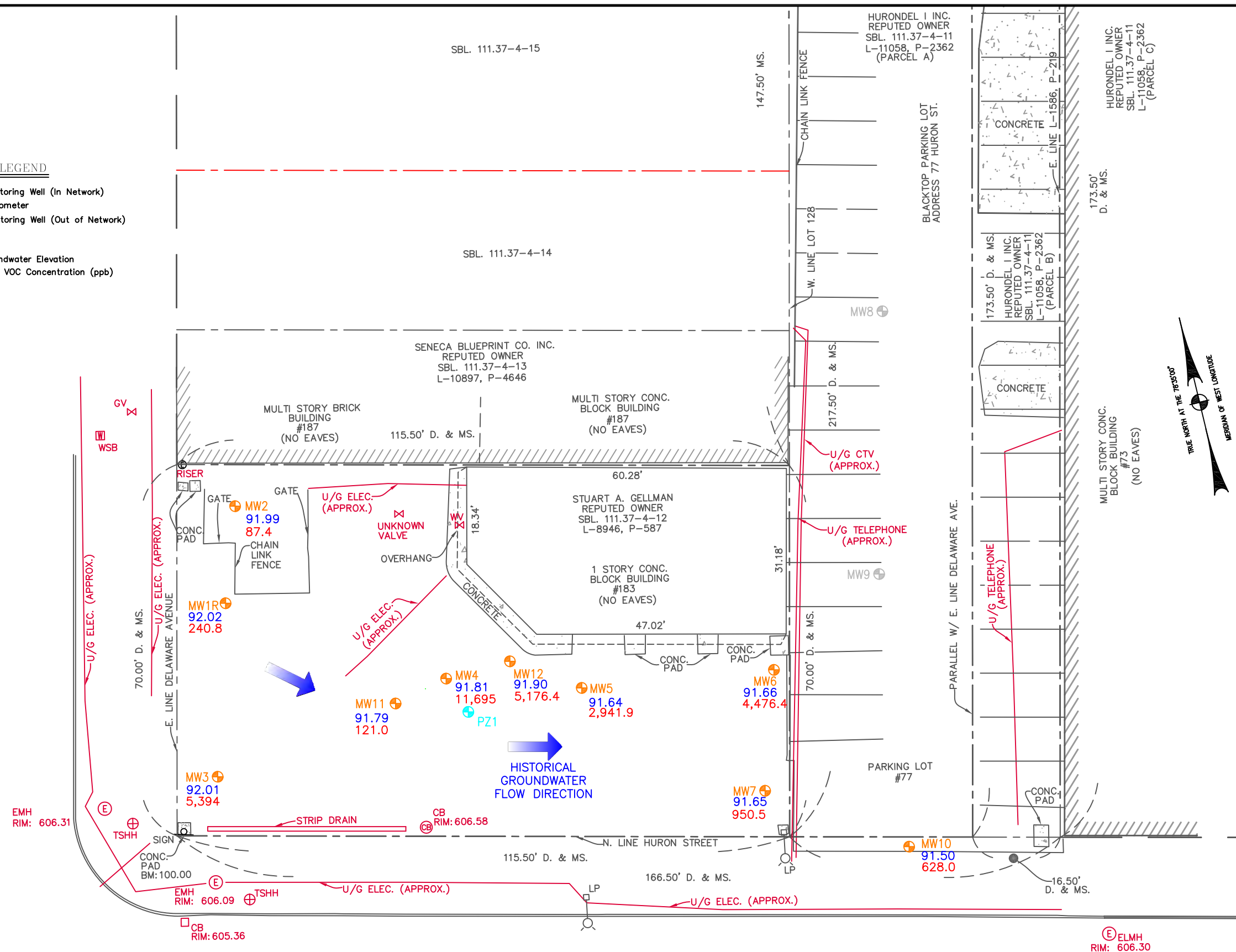
- Figure 5: Single Phase Wiring Diagram
- Table 1: Historical Groundwater Data Summary
- Table 2: Groundwater VOC Data Summary
- Table 3: DO Data Summary
- Table 4: ORP Data Summary
- Table 5: Organic Vapor Meter Reading Summary
- Table 6: Percent Oxygen Summary
- Table 7: System Operation Summary

- Chart 1: Source Area Monitoring Wells
- Chart 2: Upgradient Monitoring Wells
- Chart 3: Downgradient Monitoring Wells
- Chart 4: Average Site DO
- Chart 5: Average Site ORP
- Chart 6: DO v. Groundwater Quality
- Chart 7: System Operation Summary

- Appendix A: System Photographs
- Appendix B: Oxygen Injection Design/Calculations
- Appendix C: Laboratory Analytical Reports

FIGURES

- LEGEND**
- ⊕ MW1R - Monitoring Well (In Network)
 - ⊕ PZ1 - Piezometer
 - ⊕ MW10 - Monitoring Well (Out of Network)
- 90.99 - Groundwater Elevation
 13,099 - Total VOC Concentration (ppb)



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 DESIGNED BY: HAA
 REVIEWED BY: SLM
 DRAWN BY: HAA

REVISION	
DATE	BY
3/2/13	DRG

SCALE IN FEET: 1"=20'

PROJECT NAME / LOCATION
FORMER SUNOCO STATION
181 DELAWARE AVENUE
BUFFALO, NY

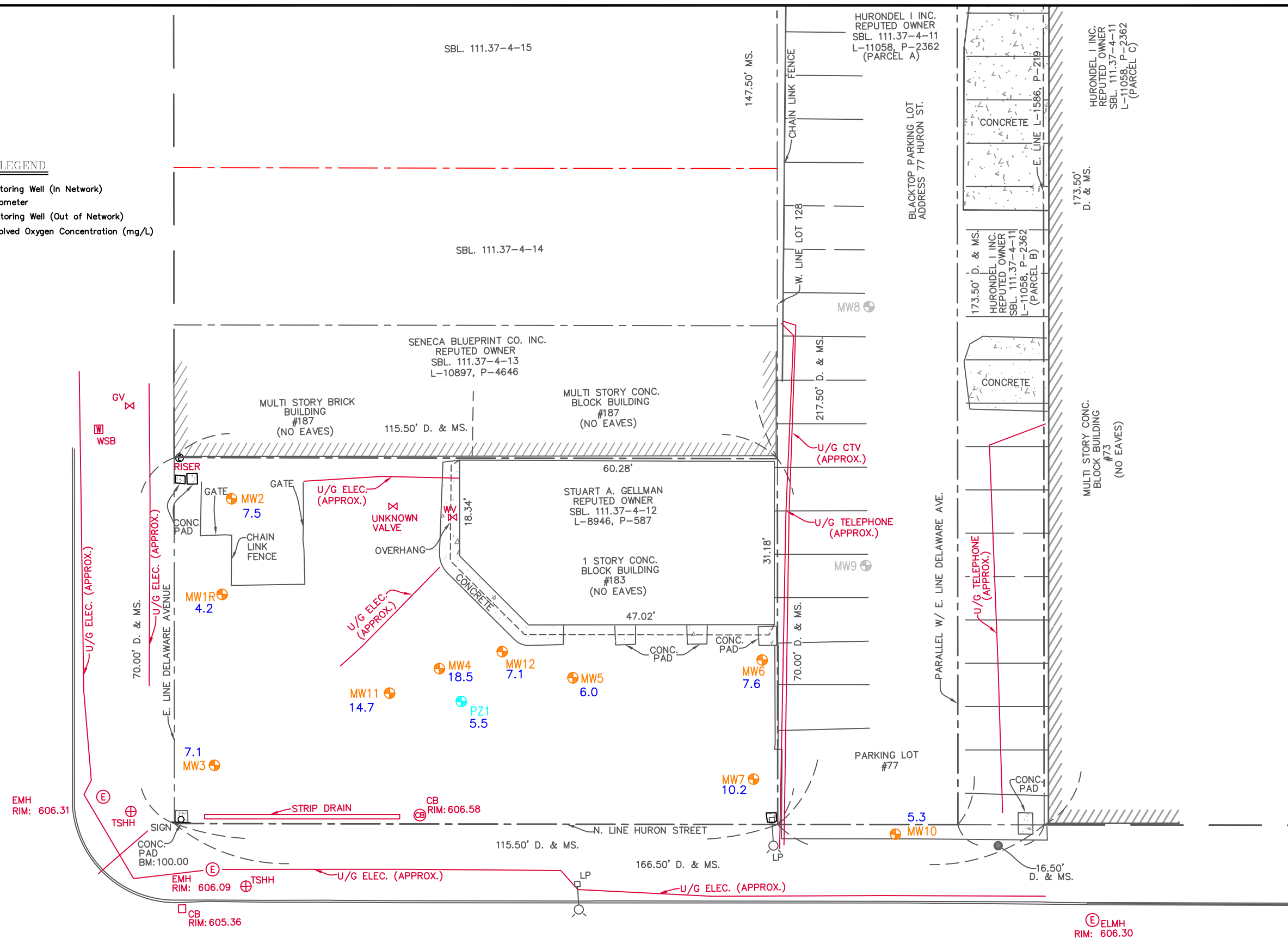
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GROUNDWATER ELEVATIONS & QUALITY SUMMARY

DATE: March 11, 2013
 PROJECT NO.: 10-043
 FIGURE: 1

Note: Site survey, "Boundary and Topographic Survey, 183 Delaware Avenue, Buffalo, New York", prepared by TVGA Consultants and dated May 16, 2011. Unless specifically stated in writing, this drawing and the data presented is proprietary and the sole property of Matrix Environmental Technologies Inc (METI) and is for the expressed use of its client, or their designated representative, for the specific project/location identified on the drawing. All data and locations are for reference only and are not a guarantee of site conditions. This drawing may not be transferred, copied, or altered in any way, other than specified on the drawing, without written permission from METI. Any violation of this declaration will be at the user's risk entirely and without any risk or liability to METI.



- LEGEND**
- ⊕ MW1R - Monitoring Well (In Network)
 - ⊕ PZ1 - Piezometer
 - ⊕ MW10 - Monitoring Well (Out of Network)
 - 90.99 - Dissolved Oxygen Concentration (mg/L)



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SCALE IN FEET: 1"=20'

PROJECT NAME / LOCATION
FORMER SUNOCO STATION
181 DELAWARE AVENUE
BUFFALO, NY

TITLE
MONITORING WELL
DISSOLVED OXYGEN DATA

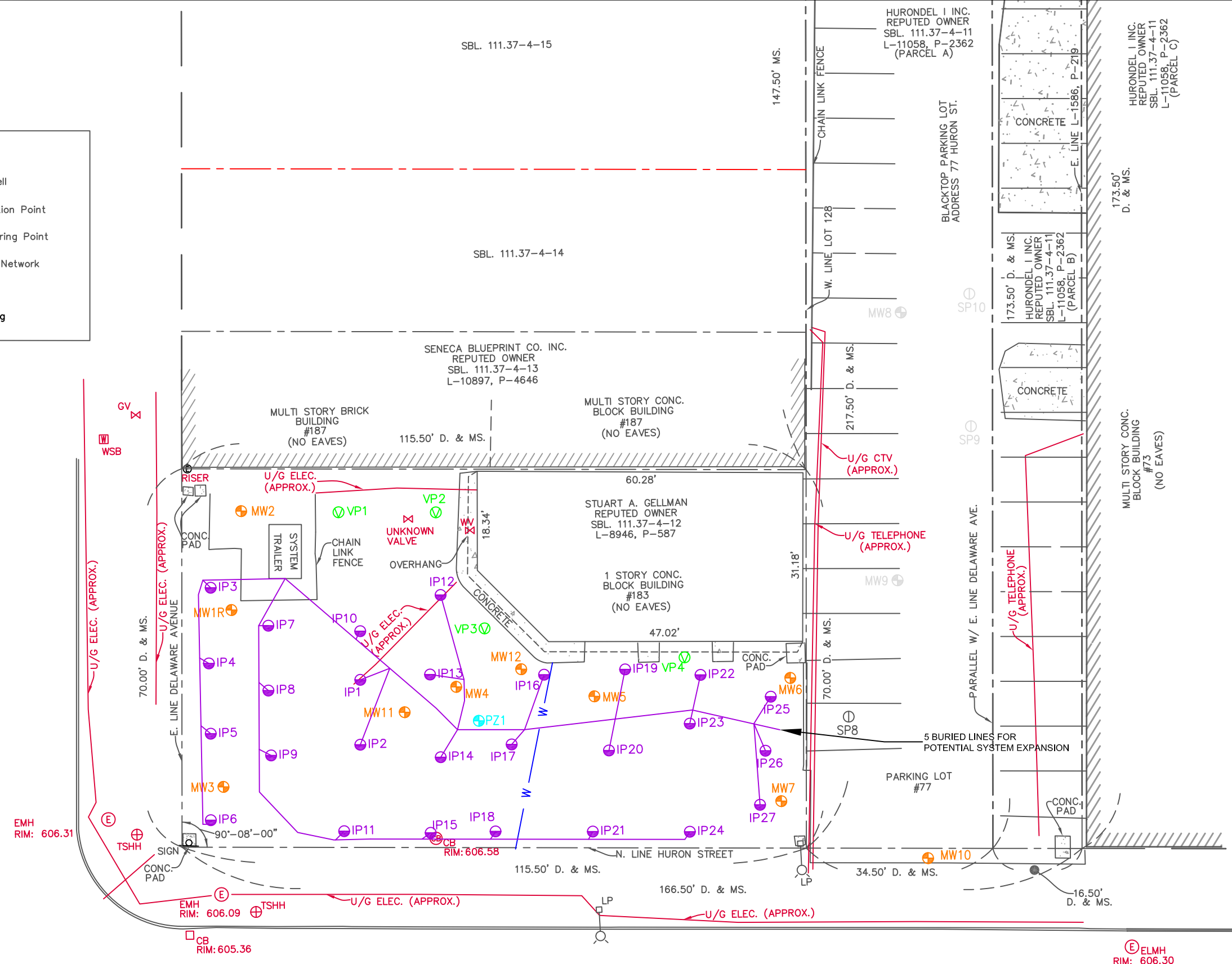
DATE: March 11, 2013
 PROJECT NO.: 10-043
 FIGURE: 2

Note: Site survey, "Boundary and Topographic Survey, 183 Delaware Avenue, Buffalo, New York", prepared by TVGA Consultants and dated May 16, 2011. Unless specifically stated in writing, this drawing and the data presented is proprietary and the sole property of Matrix Environmental Technologies Inc (METI) and is for the expressed use of its client, or their designated representative, for the specific project/location identified on the drawing. All data and locations are for reference only and are not a guarantee of site conditions. This drawing may not be transferred, copied, or altered in any way, other than specified on the drawing, without written permission from METI. Any violation of this declaration will be at the user's risk entirely and without any risk or liability to METI.



LEGEND

- MW4 Monitoring Well
- IP7 Oxygen Injection Point
- VP1 Vapor Monitoring Point
- MW9 Out of Data Network
- PZ1 Piezometer
- System Piping



Note: Site survey, "Boundary and Topographic Survey, 183 Delaware Avenue, Buffalo, New York", prepared by TVGA Consultants and dated May 16, 2011. Locations of some historical points (denoted TP, B, EP, and SB above) are estimated based on the Site Map provided by Groundwater and Environmental Services, Inc. on February 17, 2011. All elements are provided for reference and should not be used unless explicitly authorized by Matrix Environmental Technologies Inc.



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REVISION	
BY	DATE
HLP	7/7/11
HLP	10/27/11

SCALE IN FEET: 1" = 20'

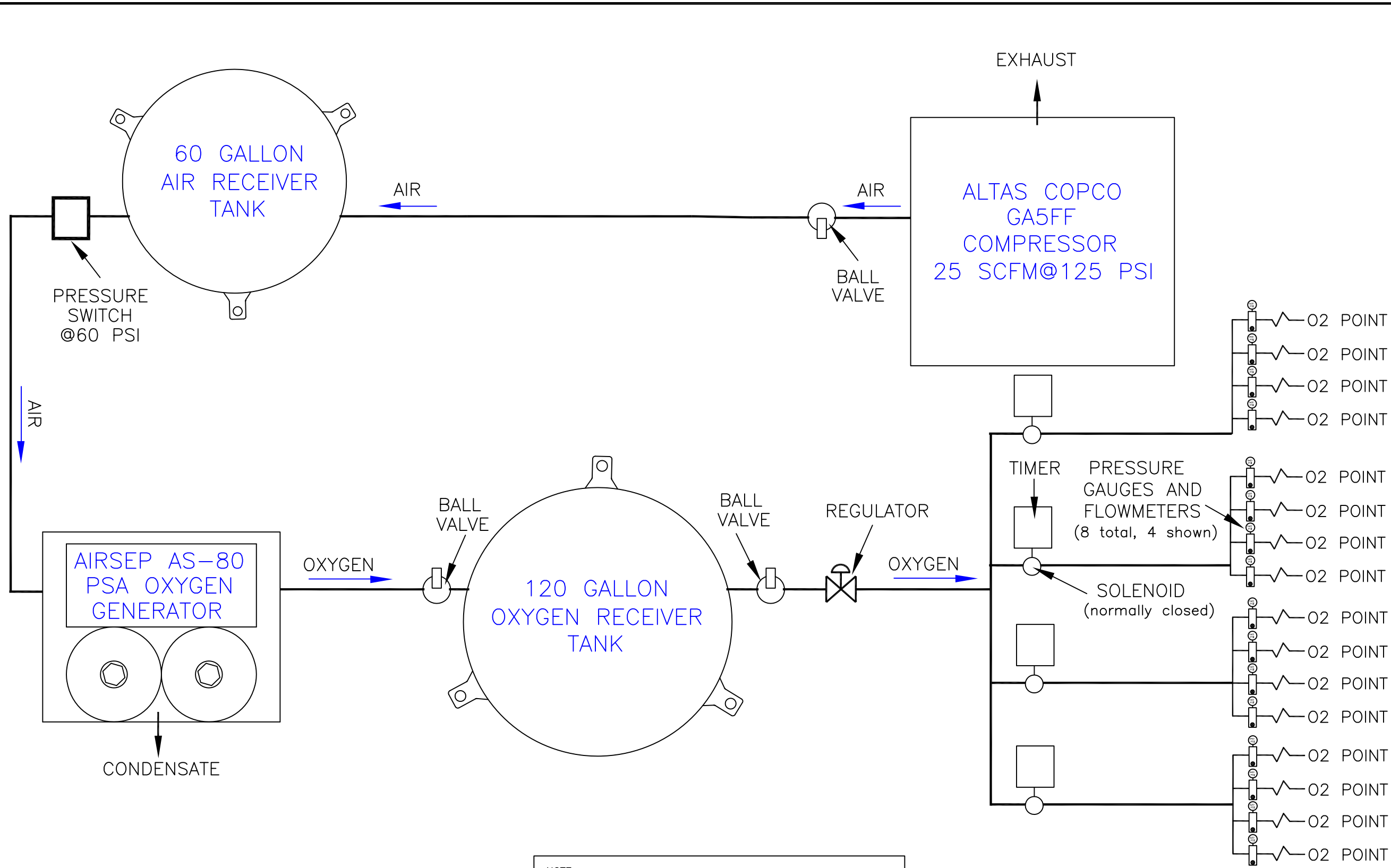
PROJECT NAME / LOCATION:
FORMER SUNOCO STATION
181 DELAWARE AVENUE
BUFFALO, NY

TITLE:
OXYGEN INJECTION
SYSTEM LAYOUT

DATE:
10/2011

PROJECT NO.:
10-043

FIGURE:
3



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S. HESS	2/20/02
HLP	11/7/11

PROJECT NAME / LOCATION:
FORMER SUNOCO STATION
181 DELAWARE AVE.
BUFFALO, NY

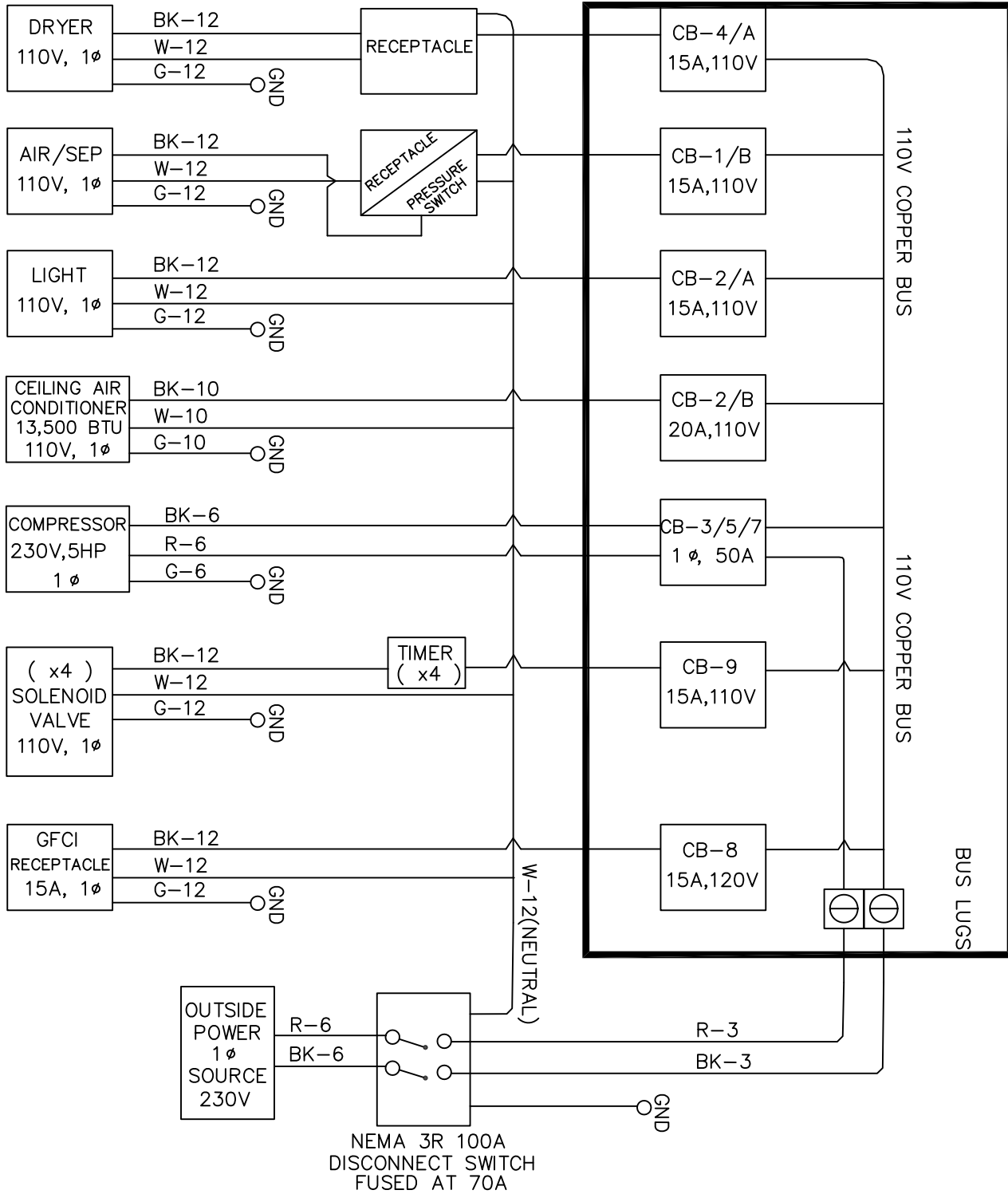
TITLE:
PIPING AND INSTRUMENTATION DIAGRAM
OXYGEN INJECTION SYSTEM

80 SCFH 32 PT. SYSTEM
US PATENT NO. 5,874,001

DATE:

PROJECT NO.:
10-043

FIGURE:
4



CIRCUIT BREAKER PANEL

BUS LUGS

PREPARED BY: 	PROJECT MGR: SLM	PROJECT NAME / LOCATION: FORMER SUNOCO STATION 181 DELAWARE AVE. BUFFALO, NY	TITLE: SINGLE PHASE WIRING DIAGRAM OXYGEN INJECTION SYSTEM U.S. PATENT 5,874,001	REVISION		DATE:
	DESIGNED BY: S. HESS			BY S. HESS	DATE 2/18/02	PROJECT NO.: 10-043
REVIEWED BY: SRC	BY S. HESS			DATE 2/20/02	FIGURE: 5	
DRAWN BY: S. HESS	BY HLP			DATE 11/7/11		
PREPARED FOR: SUNOCO, INC. (R&M) SYRACUSE, NY						



TABLES

Table 1

**Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York**

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (ug/L)
MW1 99.43 4-inch PVC Total Depth: 18' Screen Interval: 3-18'	06/19/2004	8.40	0.00	91.03	ND	148	583	2,936	3,667	ND	
	10/31/2005	8.48	0.00	90.95	ND	12	64	400	476	ND	
	01/30/2006	8.19	0.00	91.24	ND	93	290	2,200	2,583	ND	
	04/18/2006	8.52	0.00	90.91	ND	140	660	4,500	5,300	66	
	10/02/2006	8.31	0.00	91.12	1.0	180	610	3,900	4,691	ND	
	03/13/2007	8.47	0.00	90.96	ND	19	120	940	1,079	ND	
	06/25/2007	8.68	0.00	90.75	ND	44	210	1,700	1,954	ND	
	11/30/2007	8.40	0.00	91.03	ND	18	150	660	828	ND	
	02/19/2008	8.41	0.00	91.02	ND	96	230	1,200	1,526	ND	
	05/27/2008	8.63	0.00	90.80	ND	130	220	1,900	2,250	ND	
	08/28/2008	5.50	0.00	93.93	ND	44	220	1,100	1,364	ND	
	11/24/2008	8.34	0.00	91.09	ND	ND	5.8	96.7	102.5	ND	
	02/11/2009	8.28	0.00	91.15	ND	19	102	506	627	ND	
	05/13/2009	8.33	0.00	91.10	ND	10.3	69.4	343	422.7	ND	
	08/19/2009	7.82	0.00	91.61	ND	15.3	48.1	363	426.4	ND	
Well removed on 10/26/09, replaced with MW-1R.	11/17/2009	8.76	0.00	90.36	ND	ND	165	2,020	2,185	ND	
MW1R 99.12 4-inch PVC Total Depth: 15' Depth to Screen: 4.28' 99.52 100.18	02/23/2010	8.61	0.00	90.51	ND	ND	105	923	1,028	ND	
	05/17/2010	8.55	0.00	90.57	ND	ND	48.3	617	665.3	ND	
	09/22/2010	8.78	0.00	90.34	ND	ND	83.9	671	754.9	ND	
	12/07/2010	8.42	0.00	90.70	ND	ND	9.5	184	193.5	ND	
	03/16/2011	7.95	0.00	91.17	ND<0.5	ND<0.7	5.0	48	53	ND<0.5	275
	06/22/2011	8.43	0.00	90.69	ND<0.50	ND<1.0	29.8	176.2	206	ND<1.0	596.5
	09/08/2011	8.45	0.00	91.07	ND<2.5	ND<5.0	9.6	165	174.6	ND<5.0	978.3
	12/01/2011	8.28	0.00	91.90	ND<0.50	ND<1.0	29.5	294	323.5	ND<1.0	1,235.1
	03/26/2012	8.33	0.00	91.85	ND<0.50	ND<1.0	12.2	67.9	80.1	ND<1.0	199.9
	06/25/2012	7.38	0.00	92.80	ND<0.50	ND<1.0	14.2	160.0	174.2	ND<1.0	848.0
	09/11/2012	8.43	0.00	91.75	ND<0.50	ND<1.0	17.6	193	210.6	ND<1.0	1,063.9
	12/13/2012	8.51	0.00	91.67	ND<0.50	ND<1.0	12.6	122	134.6	ND<1.0	459.2
	03/11/2013	8.16	0.00	92.02	ND<0.50	4	3.5	64	72.0	ND<1.0	240.8

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MW2 99.84	06/19/2004	8.67	0.00	91.17	32	ND	ND	ND	32	ND		
	10/31/2005	8.74	0.00	91.10	ND	ND	ND	ND	ND	ND		
	01/30/2006	8.46	0.00	91.38	ND	ND	ND	ND	ND	ND		
	4-inch PVC Total Depth: 20' Depth to Screen: 7.38'	04/18/2006	8.77	0.00	91.07	ND	9.1	ND	7.7	16.8	25	
	10/02/2006	8.60	0.00	91.24	ND	ND	ND	ND	ND	ND		
	03/13/2007	8.73	0.00	91.11	ND	ND	ND	ND	ND	ND		
	06/25/2007	8.91	0.00	90.93	ND	ND	ND	ND	ND	ND		
	11/30/2007	8.70	0.00	91.14	ND	ND	ND	ND	ND	ND		
	02/19/2008	8.60	0.00	91.24	ND	ND	ND	5.7	5.7	ND		
	05/27/2008	8.89	0.00	90.95	ND	ND	ND	ND	ND	ND		
	08/28/2008	6.01	0.00	93.83	ND	ND	ND	ND	ND	ND		
	11/24/2008	9.18	0.00	90.66	ND	ND	ND	ND	ND	ND		
	02/11/2009	8.70	0.00	91.14	ND	ND	ND	ND	ND	ND		
	05/13/2009	8.80	0.00	91.04	ND	ND	ND	ND	ND	ND		
	08/19/2009	8.37	0.00	91.47	ND	ND	ND	ND	ND	ND		
	11/17/2009	8.98	0.00	90.86	ND	ND	ND	ND	ND	ND		
	02/23/2010	8.87	0.00	90.97	ND	ND	ND	ND	ND	ND		
	05/17/2010	8.75	0.00	91.09	ND	ND	ND	ND	ND	ND		
	09/22/2010	8.99	0.00	90.85	ND	ND	ND	ND	ND	ND		
12/07/2010	8.64	0.00	91.20	ND	ND	ND	ND	ND	ND			
100.74	03/16/2011	8.26	0.00	91.58	ND<0.5	ND<0.7	ND<0.8	ND<1.6	ND	ND<0.5	ND	
	06/22/2011	8.70	0.00	91.14	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND	ND<1.0	ND	
	09/08/2011	8.71	0.00	91.13	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND	ND<1.0	ND	
	12/01/2011	8.70	0.00	92.04	ND<0.5	ND<1.0	ND<1.0	3.0	3	ND<1.0	44	
	03/26/2012	8.83	0.00	91.91	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND	ND<1.0	5.9	
	06/25/2012	8.91	0.00	91.83	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND	3	ND	
	09/11/2012	8.88	0.00	91.86	ND<0.50	ND<1.0	ND<1.0	3.2	3.2	ND<1.0	34.3	
	12/13/2012	9.02	0.00	91.72	ND<0.50	ND<1.0	ND<1.0	13.7	13.7	ND<1.0	130.5	
	03/11/2013	8.75	0.00	91.99	ND<0.50	2	1	12.9	15.9	ND<1.0	87.4	

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MW4 99.40	06/19/2004	8.47	0.00	90.93	286	4,630	2,120	8,920	15,956	ND		
	10/31/2005	8.52	0.00	90.88	300	1,600	1,100	8,600	11,600	ND		
	01/30/2006	8.31	0.01	91.10	NSP	NSP	NSP	NSP	NSP	NSP		
	4-inch PVC Total Depth: 20' Depth to Screen: 8.63'	04/18/2006	8.57	0.00	90.83	390	1,900	1,800	7,900	11,990	ND	
	10/02/2006	8.33	0.02	91.09	NSP	NSP	NSP	NSP	NSP	NSP		
	03/13/2007	8.39	0.24	91.20	NSP	NSP	NSP	NSP	NSP	NSP		
	06/25/2007	9.00	0.31	90.65	NSP	NSP	NSP	NSP	NSP	NSP		
	11/30/2007	8.23	0.18	91.31	NSP	NSP	NSP	NSP	NSP	NSP		
	02/19/2008	8.43	0.02	90.99	NSP	NSP	NSP	NSP	NSP	NSP		
	05/27/2008	8.61	0.00	90.79	120	1,300	3,300	16,000	20,720	ND		
	08/28/2008	4.73	0.00	94.67	390	2,600	3,100	14,000	20,090	ND		
	11/24/2008	8.90	0.00	90.50	29.4	640	2,540	10,900	14,109	ND		
	02/11/2009	8.40	0.00	91.00	22.5	275	1,820	5,490	7,608	ND		
	05/13/2009	8.58	0.00	90.82	25.6	212	1,920	4,660	6,818	ND		
	08/19/2009	8.57	0.00	90.83	23.9	372	2,280	6,870	9,546	ND		
	11/17/2009	8.96	0.00	90.44	ND	304	1,060	2,650	4,014	ND		
	02/23/2010	8.83	0.00	90.57	ND	277	984	2,860	4,121	ND		
	05/17/2010	8.60	0.00	90.80	7.9	489	1,180	4,010	5,686.9	ND		
	09/22/2010	8.80	0.00	90.60	7.6	294	1,220	3,550	5,071.6	ND		
	12/07/2010	8.53	0.00	90.87	34.6	677	1,510	4,030	6,251.6	ND		
03/16/2011	8.03	0.00	91.37	35.0	770	2,600	6,400	9,805	ND<3.0	12,895		
06/22/2011	8.46	0.00	90.94	22.7	766	2,280	5,990	9,059	ND<1.0	12,710.5		
99.45	09/08/2011	8.52	0.00	90.88	29.7	764	1,670	4,980	7,444	ND<10	9,403.5	
100.21	12/01/2011	8.37	0.02	91.84	16.1	801	1,280	9,040	11,137	ND<1.0	17,336	
03/26/2012	8.49	0.00	91.72	ND<10	848	839	8,490	10,177	ND<20	14,201		
06/25/2012	8.63	0.00	91.58	ND<10	915	1,280	8,630	10,825	ND<20	14,593		
09/11/2012	7.85	0.00	92.36	ND<5.0	332	666	5,900	6,898	ND<10	10,806		
12/13/2012	8.64	0.00	91.57	ND<0.50	98.5	54.2	4,970	5,122.7	ND<1.0	11,286.4		
03/11/2013	8.40	0.00	91.81	ND<0.25	108.0	403.0	5,510	6,021.0	ND<50	11,695.0		

Table 1

**Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York**

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (ug/L)
MW5 99.56 4-inch PVC Total Depth: 20' Depth to Screen: 8.58'	06/19/2004	8.64	0.00	90.92	ND	2,940	2,030	7,870	12,840	ND	
	10/31/2005	8.72	0.00	90.84	ND	220	390	670	1,280	ND	
	01/30/2006	8.51	0.00	91.05	10	2,100	1,300	4,700	8,110	ND	
	04/18/2006	8.72	0.00	90.84	ND	1,200	780	2,700	4,680	ND	
	10/02/2006	8.55	0.00	91.01	2.7	810	650	2,200	3,662.7	ND	
	03/13/2007	8.71	0.00	90.85	ND	1,700	950	4,200	6,850	ND	
	06/25/2007	9.38	0.00	90.18	ND	1,200	910	3,200	5,310	ND	
	11/30/2007	8.70	0.00	90.86	ND	780	970	2,400	4,150	ND	
	02/19/2008	8.63	0.00	90.93	ND	870	390	1,100	2,360	ND	
	05/27/2008	8.85	0.00	90.71	ND	1,900	1,400	4,200	7,500	ND	
	08/28/2008	2.62	0.00	96.94	ND	63	61	200	324	ND	
	11/24/2008	9.02	0.00	90.54	ND	27.6	45.8	104	177.4	ND	
	02/11/2009	8.64	0.00	90.92	ND	614	393	918	1,925	ND	
	05/13/2009	8.72	0.00	90.84	ND	885	1,350	3,740	5,975	ND	
	08/19/2009	8.69	0.00	90.87	ND	1,750	1,560	3,970	7,280	ND	
	11/17/2009	9.01	0.00	90.55	ND	2,390	1,360	4,570	8,320	ND	
	02/23/2010	8.90	0.00	90.66	ND	2,300	1,550	5,810	9,660	ND	
	05/17/2010	8.72	0.00	90.84	ND	1,260	1,080	3,840	6,180	ND	
	09/22/2010	8.97	0.00	90.59	ND	1,100	322	944	2,366	ND	
12/07/2010	8.60	0.00	90.96	ND	1,440	1,250	4,110	6,800	ND		
03/16/2011	8.19	0.00	91.37	ND<1.0	1,200	1,100	3,280	5,580	ND<1.0	6,722	
06/22/2011	8.63	0.00	90.93	0.9	1,490	1,300	3,930	6,721	ND<1.0	8,421.23	
09/08/2011	8.64	0.00	90.92	ND<2.5	781	820	1,950	3,551	ND<5.0	4,537.9	
12/01/2011	8.58	0.00	91.74	0.7	659	833	2,330	3,823	ND<1.0	5,122.4	
03/26/2012	8.70	0.00	91.62	ND<2.5	556	851	1,860	3,267	ND<5.0	4,154	
06/25/2012	8.80	0.00	91.52	ND<5.0	623	860	2,420	3,903	ND<10	5,051	
09/11/2012	8.71	0.00	91.61	ND<5.0	189	569	1,850	2,608	ND<10	3,731	
12/13/2012	8.82	0.00	91.50	ND<0.50	546	605	1,170	2,321	ND<1.0	2,969.9	
100.32	03/11/2013	8.68	0.00	91.64	ND<0.50	491	535	1,170	2,196	ND<10	2,941.9

Table 1

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Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (ug/L)	
MW6 100.00	06/19/2004	9.19	0.00	90.81	ND	4,080	1,750	7,740	13,570	ND		
	10/31/2005	9.31	0.00	90.69	ND	2,600	1,300	5,800	9,700	ND		
	01/30/2006	9.03	0.00	90.97	ND	4,400	1,200	5,500	11,100	ND		
	4-inch PVC Total Depth: 20' Depth to Screen: 8.68'	04/18/2006	9.31	0.00	90.69	80	2,400	740	3,500	6,720	18	
	10/02/2006	9.14	0.00	90.86	4.0	4,500	1,300	5,500	11,304	ND		
	03/13/2007	9.27	0.00	90.73	ND	3,900	980	4,900	9,780	ND		
	06/25/2007	10.47	0.00	89.53	ND	3,500	830	3,800	8,130	ND		
	11/30/2007	9.23	0.00	90.77	ND	1,200	260	1,700	3,160	ND		
	02/19/2008	9.21	0.00	90.79	ND	1,300	190	980	2,470	ND		
	05/27/2008	9.39	0.00	90.61	ND	1,200	390	2,200	3,790	ND		
	08/28/2008	7.79	0.00	92.21	ND	190	110	360	660	ND		
	11/24/2008	9.55	0.00	90.45	ND	6.0	ND	69.5	75.5	ND		
	02/11/2009	9.22	0.00	90.78	ND	1,110	652	2,340	4,102	ND		
	05/13/2009	9.27	0.00	90.73	ND	2,430	1,460	5,840	9,730	ND		
	08/19/2009	9.24	0.00	90.76	ND	1,930	1,030	3,940	6,900	ND		
	11/17/2009	9.45	0.00	90.55	ND	2,760	1,120	4,900	8,780	ND		
	02/23/2010	9.42	0.00	90.58	ND	3,870	1,720	8,070	13,660	ND		
	05/17/2010	9.21	0.00	90.79	ND	2,020	749	3,570	6,339	ND		
	09/22/2010	9.48	0.00	90.52	ND	1,550	276	1,070	2,896	ND		
	12/07/2010	9.18	0.00	90.82	ND	1,760	764	3,380	5,904	ND		
100.03 100.69	03/16/2011	8.81	0.00	91.19	ND<3.0	2,300	850	3,900	7,050	ND<3.0	8,282	
	06/22/2011	9.17	0.00	90.83	ND<0.50	1,160	785	3,050	4,995	ND<1.0	6,445.9	
	09/08/2011	9.19	0.00	90.84	ND<2.5	790	593	2,140	3,523	ND<5.0	4,168.9	
	12/01/2011	8.98	0.00	91.71	ND<0.50	912	143	4,360	5,415	ND<1.0	6,591.5	
	03/26/2012	9.10	0.00	91.59	ND<2.5	170	44	3,000	3,214	ND<5.0	3,976.3	
	06/25/2012	9.19	0.00	91.50	ND<5.0	447	62	3,750	4,259	ND<10	5,146.8	
	09/11/2012	9.14	0.00	91.55	ND<5.0	362	28.1	2,410	2,800.1	ND<10	3,363.1	
	12/13/2012	9.19	0.00	91.50	ND<0.50	395	27.2	3,140	3,562.2	ND<1.0	4,355.4	
	03/11/2013	9.03	0.00	91.66	ND<0.50	384	18.4	3,330	3,732.4	ND<10	4,476.4	

Table 1

**Historical Groundwater Data Summary
Former Sunoco Station
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Buffalo, New York**

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (ug/L)	
MW7 98.77	06/19/2004	7.98	0.00	90.79	648	3,100	2,320	10,450	16,518	ND		
	10/31/2005	8.11	0.00	90.66	710	2,400	1,300	7,800	12,210	ND		
	01/30/2006	7.85	0.00	90.92	870	4,200	2,500	13,000	20,570	ND		
	4-inch PVC Total Depth: 20' Depth to Screen: 8.58'	04/18/2006	8.07	0.00	90.70	910	4,800	2,400	13,000	21,110	ND	
	10/02/2006	7.91	0.00	90.86	560	3,900	2,100	9,500	16,060	ND		
	03/13/2007	NG-i	0.00	NG-i	NSI	NSI	NSI	NSI	NSI	NSI		
	06/25/2007	8.29	0.00	90.48	ND	ND	ND	ND	ND	ND		
	11/30/2007	8.02	0.00	90.75	160	2,500	1,500	8,700	12,860	ND		
	02/19/2008	8.04	0.00	90.73	200	3,300	1,700	8,300	13,500	ND		
	05/27/2008	8.18	0.00	90.59	22	190	360	1,900	2,472	ND		
	08/28/2008	7.49	0.00	91.28	ND	310	180	610	1,100	ND		
	11/24/2008	8.79	0.00	89.98	48.9	2,130	365	8,350	10,894	ND		
	02/11/2009	8.45	0.00	90.32	36.1	1,070	823	3,650	5,579	ND		
	05/13/2009	8.50	0.00	90.27	71.8	1,450	2,350	10,000	13,872	ND		
	08/19/2009	8.47	0.00	90.30	57.3	1,950	2,590	13,600	18,197	ND		
	11/17/2009	8.76	0.00	90.01	38.1	2,150	1,920	9,010	13,118	ND		
	02/23/2010	NG-i	0.00	NG-i	NSI	NSI	NSI	NSI	NSI	NSI		
	05/17/2010	8.48	0.00	90.29	23.4	2,240	1,960	9,570	13,793.4	ND		
	09/22/2010	NG-i	0.00	NG-i	NSI	NSI	NSI	NSI	NSI	NSI		
	12/07/2010	8.41	0.00	90.36	18.9	2,820	1,890	9,990	14,718.9	ND		
03/16/2011	7.96	0.00	90.81	12	2,200	1,800	9,500	13,512	ND<3.0	15,362		
06/22/2011	8.36	0.00	90.41	11.9	2,290	1,830	9,840	13,972	ND<1.0	16,420.8		
99.17	09/08/2011	8.40	0.00	90.77	51.1	2,930	2,200	10,600	15,781	ND<20	17,569.1	
99.96	12/01/2011	8.32	0.00	91.64	2.2	568	208	10,400	11,178	ND<1.0	13,459.2	
03/26/2012	8.43	0.00	91.53	ND<5.0	132	60.2	6,740	6,932.2	ND<10	8,435.2		
06/25/2012	8.52	0.00	91.44	ND<5.0	60.6	21.8	5,810	5,892.4	ND<10	7,163.4		
09/11/2012	8.53	0.00	91.43	ND<5.0	40.1	54.9	2,660	2,755	ND<10	3,669		
12/13/2012	8.65	0.00	91.31	ND<0.50	4.1	20.5	645	669.6	ND<1.0	1,002.3		
03/11/2013	8.31	0.00	91.65	ND<0.50	2.3	10.0	578	590.3	ND<1.0	950.5		

Table 1

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Former Sunoco Station
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Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (ug/L)	
MW10 98.87	06/19/2004	NG	0.00	NG	NS	NS	NS	NS	NS	NS		
	10/31/2005	8.31	0.00	90.56	27	60	46	160	293	ND		
	01/30/2006	8.03	0.00	90.84	190	60	120	370	740	ND		
	4-inch PVC Total Depth: 18' Depth to Screen: NA	04/18/2006	8.30	0.00	90.57	45	28	130	470	673	ND	
	10/02/2006	8.11	0.00	90.76	93	26	34	180	333	ND		
	03/13/2007	8.26	0.00	90.61	65	7.3	23	28	123.3	ND		
	06/25/2007	7.58	0.00	91.29	220	110	130	160	620	ND		
	11/30/2007	8.25	0.00	90.62	170	87	200	2,100	2,557	ND		
	02/19/2008	8.18	0.00	90.69	280	45	100	590	1,015	ND		
	05/27/2008	8.40	0.00	90.47	160	20	31	300	511	ND		
	08/28/2008	7.82	0.00	91.05	490	190	350	700	1,730	ND		
	11/24/2008	8.45	0.00	90.42	28.4	27.1	31.5	199	286	ND		
	02/11/2009	8.15	0.00	90.72	74.7	188	800	700	1,762.7	ND		
	05/13/2009	8.17	0.00	90.7	186	163	1,100	1,060	2,509	ND		
	08/19/2009	8.14	0.00	90.73	285	181	395	941	1,802	ND		
	11/17/2009	8.45	0.00	90.42	131	59.1	242	378	810	ND		
	02/23/2010	8.31	0.00	90.56	82.9	127	298	758	1,265.9	ND		
	05/17/2010	8.21	0.00	90.66	92.2	197	480	1,090	1,859.2	ND		
	09/22/2010	8.41	0.00	90.46	17.6	44.3	185	408	654.9	ND		
	12/07/2010	8.09	0.00	90.78	11.4	141	423	1,280	1,855.4	ND		
	03/16/2011	7.61	0.00	91.26	5	42	94	368	509	ND<0.5	574	
	06/22/2011	8.01	0.00	90.86	33.3	68.2	540	651	1,293	ND<1.0	1,512.3	
	09/08/2011	8.08	0.00	90.79	70.9	53.7	563	520	1,208	ND<2.0	1,431.8	
12/01/2011	No Access											
03/26/2012												
99.60	06/25/2012	8.22	0.00	90.65	2.8	26.6	315	329	670.6	ND<1.0	481.7	
09/11/2012	8.24	0.00	91.36	1.3	51.2	564	449	1,064.2	ND<1.0	1,423.9		
12/13/2012	8.26	0.00	91.34	0.85	44.1	250	316	610.95	ND<1.0	702.65		
03/11/2013	8.10	0.00	91.50	ND<0.5	39.1	196	285	520.10	ND<1.0	628.00		

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Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (ug/L)
MW11 99.45 4-inch PVC Total Depth: 19.3 Depth to Screen: 3.08'	04/18/2006	8.51	0.00	90.94	540	2,500	2,100	9,800	14,940	ND	
	10/02/2006	8.38	0.00	91.07	340	3,600	2,700	10,000	16,640	ND	
	03/13/2007	8.52	0.00	90.93	200	1,600	1,800	7,500	11,100	ND	
	06/25/2007	8.73	0.00	90.72	190	1,100	2,400	9,600	13,290	ND	
	11/30/2007	NG	0.00	NG	NS	NS	NS	NS	NS	NS	
	02/19/2008	8.56	0.00	90.89	490	290	1,600	5,200	7,580	ND	
	05/27/2008	8.70	0.00	90.75	640	1500	2,400	5,900	10,440	ND	
	08/28/2008	4.00	0.00	95.45	370	1,400	2,900	11,000	15,670	ND	
	11/24/2008	8.58	0.00	90.87	115	1,020	2,020	11,600	14,755	ND	
	02/11/2009	8.15	0.00	91.3	138	324	1,870	6,480	8,812	ND	
	05/13/2009	8.24	0.00	91.21	134	310	903	2,980	4,327	ND	
	08/19/2009	8.19	0.00	91.26	222	1,090	1,820	7,270	10,402	ND	
	11/17/2009	8.46	0.00	90.99	111	295	521	1,900	2,827	ND	
	02/23/2010	8.32	0.00	91.13	66.9	239	369	2,210	2,884.9	ND	
	05/17/2010	8.24	0.00	91.21	104	514	834	2,780	4,232	ND	
	09/22/2010	8.60	0.00	90.85	52.8	157	256	891	1,356.8	ND	
	12/07/2010	8.11	0.00	91.34	133	499	619	2,350	3,601	ND	
03/16/2011	7.67	0.00	91.78	220	1,100	800	3,210	5,330	ND<1.0	6,901	
06/22/2011	8.12	0.00	91.33	66.1	405	588	3,970	5,029.1	ND<1.0	6,753.8	
98.94 99.85	09/08/2011	8.01	0.00	90.93	10.4	32	50	1,610	1,701.6	ND<2.0	2,484.5
	12/01/2011	8.03	0.00	91.82	2.9	13	152	333	500.9	ND<1.0	887.4
	03/26/2012	8.10	0.00	91.75	2.9	8.4	30.4	173	214.7	ND<10	278.3
	06/25/2012	8.29	0.00	91.56	1.1	10.8	67.8	262	341.7	ND<1.0	496.2
	09/11/2012	8.30	0.00	91.55	0.80	7.5	97.1	186	291.7	ND<1.0	494.7
	12/13/2012	8.33	0.00	91.52	ND<0.50	6.3	45.7	152	204	ND<1.0	289.8
	03/11/2013	8.06	0.00	91.79	ND<0.50	3.7	15.5	57	76	ND<1.0	121.0

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Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (ug/L)
MW12 99.35 4-inch PVC Total Depth: 20' Depth to Screen: 3.83' 99.77 100.66	05/17/2010	8.90	0.00	90.45	ND	2,110	1,370	5,500	8,980	ND	
	09/22/2010	9.10	0.00	90.25	ND	1,460	1,070	4,030	6,560	ND	
	12/07/2010	8.81	0.00	90.54	ND	2,080	1,340	5,740	9,160	ND	
	03/16/2011	8.34	0.00	91.01	3	1,800	1,200	5,480	8,483	ND<3.0	10,367
	06/22/2011	8.78	0.00	90.57	2.3	1,640	1,150	4,780	7,572.3	ND<1.0	9,546.2
	09/08/2011	8.81	0.00	90.96	ND<5.0	1,620	1,230	4,270	7,120.0	ND<10	8,533.8
	12/01/2011	8.83	0.00	91.83	2.1	997	501	3,630	5,130.1	ND<1.0	6,702.2
	03/26/2012	8.95	0.00	91.71	ND<5.0	817	728	2,470	4,015	ND<10	5,239.3
	06/25/2012	9.08	0.00	91.58	ND<5.0	856	654	3,460	4,970	ND	6,402
	09/11/2012	8.94	0.00	91.72	ND<5.0	935	672	2,760	4,367	ND<10	5,714.2
	12/13/2012	9.19	0.00	91.47	0.71	814	796	2,420	4,030.71	ND<1.0	5,601.7
	03/11/2013	8.76	0.00	91.90	ND<5.0	715	677	2,350	3,742	ND<10	5,176.4

Notes:

ND = Compound not detected.

NG = Not gauged.

NS = Not sampled.

NSI = Not sampled, well inaccessible.

NSP = Not sampled due to product.

CNS = Well casing not surveyed

Data from off-site monitoring wells has been removed from the sampling program and these tables but is available on file at METI.

Table 2
Groundwater VOC Data Summary - Four Quarters
EPA Method 8260 STARS
Former Sunoco Station
181 Delaware Avenue
Buffalo, NY

Compounds	NYDEC GW Quality Standard	MW1R				MW2				MW3			
		6/25/2012	9/11/2012	12/13/2012	3/11/2013	6/25/2012	9/11/2012	12/13/2012	3/11/2013	6/25/2012	9/11/2012	12/13/2012	3/11/2013
Benzene	1	ND<1.0	ND<0.50	ND<0.50	ND	ND<0.50	ND<0.50	ND<0.50	ND	ND<5.0	ND<5.0	ND<0.50	ND
n-Butylbenzene	5	ND<10	ND<5.0	7.7	ND	ND<5.0	ND<5.0	9.0	9.6	ND<50	ND<50	39.9	ND
sec-Butylbenzene	5	ND<10	5.8	ND<5.0	ND	ND<5.0	ND<5.0	ND<5.0	ND	ND<50	ND<50	8.6	ND
tert-Butylbenzene	5	ND<10	ND<5.0	ND<5.0	ND	ND<5.0	ND<5.0	ND<5.0	ND	ND<50	ND<50	ND<5.0	ND
Ethylbenzene	5	14.2	17.6	12.6	3.5	ND<1.0	ND<1.0	ND<1.0	1	1,170	487	670	573
Isopropylbenzene	5	30.6	48.2	10	ND	ND<5.0	ND<5.0	ND<5.0	ND	60.1	67.7	50.1	ND
p-Isopropyltoluene	5	ND<10	6.3	ND<5.0	ND	ND<5.0	ND<5.0	ND<5.0	ND	ND<50	ND<50	14.7	ND
n-Propylbenzene	5	58.8	101	21.1	7.1	ND<5.0	ND<5.0	ND<5.0	ND	103	112	85.6	ND
Toluene	5	ND<2.0	ND<1.0	ND<1.0	4.4	ND<1.0	ND<1.0	ND<1.0	2	19.8	ND<10	5.0	ND
1,2,4-Trimethylbenzene	5	490	558	261	111	ND<5.0	22.2	80.4	40.4	2,090	1,380	1,510	977
1,3,5-Trimethylbenzene	5	125	134	63.6	51.3	ND<5.0	8.9	36.4	21.5	588	461	386	284
Total Xylenes	10	160	193	122	63.5	ND<1.0	3.2	13.7	12.9	6,740	3,560	4,070	3,560
Total NYSDEC STARS VOCs	-	878.6	890.8	498	241	ND	34.3	139.5	87.4	10,770.9	6,067.7	6,839.9	5,394.0
Total BTEX	-	174.2	210.6	134.6	71.4	ND	3.2	13.7	15.9	7,929.8	4,047	4,745	4,133
MTBE	10	ND<2.0	ND<1.0	ND<1.0	ND<1.0	3.0	ND<1.0	ND<1.0	ND<1.0	ND<10	ND<10	ND<1.0	ND<1.0
Naphthalene	10	53.1	77.2	28.6	14.0	ND<5.0	5.0	12.7	ND<5.0	802	295	371	274

Table 2 (Continued)
Groundwater VOC Data Summary
EPA Method 8260 STARS
Former Sunoco Station
181 Delaware Avenue
Buffalo, NY

Compounds	NYDEC GW Quality Standard	MW4				MW5				MW6			
		6/25/2012	9/11/2012	12/13/2012	3/11/2013	6/25/2012	9/11/2012	12/13/2012	3/11/2013	6/25/2012	9/11/2012	12/13/2012	3/11/2013
Benzene	1	ND<5.0	ND<5.0	ND<0.50	ND	ND<5.0	ND<5.0	ND<0.50	ND	ND<5.0	ND<5.0	ND<0.50	ND
n-Butylbenzene	5	ND<50	ND<50	110	384	ND<50	ND<50	8.9	ND	ND<50	ND<50	12.4	ND
sec-Butylbenzene	5	ND<50	ND<50	16.5	ND	ND<50	ND<50	ND<5.0	ND	ND<50	ND<50	ND<5.0	ND
tert-Butylbenzene	5	ND<50	ND<50	ND<5.0	ND	ND<50	ND<50	ND<5.0	ND	ND<50	ND<50	ND<5.0	ND
Ethylbenzene	5	1,280	666	445	403	860	569	605	535	61.8	28.1	27.2	18.4
Isopropylbenzene	5	84.0	72.2	54.2	ND	ND<50	ND<50	30.9	ND	ND<50	ND<50	7.3	ND
p-Isopropyltoluene	5	50.7	ND<50	34.4	ND	ND<50	ND<50	ND<5.0	ND	ND<50	ND<50	6.7	ND
n-Propylbenzene	5	146	131	97.8	ND	93.2	56.4	63.1	61.9	ND<50	ND<50	10.8	ND
Toluene	5	915	332	98.5	108	623	189	546	491	447	362	395	384
1,2,4-Trimethylbenzene	5	2,780	2,420	4,170	3,910	949	933	499	518	647	419	531	521
1,3,5-Trimethylbenzene	5	842	795	1290	1,380	106	134	47	76.0	241	144	225	223
Total Xylenes	10	8,630	5,900	4,970	5,510	2,420	1,850	1,170	1,260	3,750	2,410	3,140	3,330
Total NYSDEC STARS VOCs	-	14,727.7	10,316.2	11,286.4	11,695.0	5,051.2	3,731.4	2,969.9	2,941.9	5,146.8	3,363.1	4,355.4	4,476.4
Total BTEX	-	10,825.0	6,898	5,514	6,021	3,903	2,608	2,321	2,286	4,258.8	2,800.1	3,562.2	3,732.4
MTBE	10	ND<10	ND<10	ND<1.0	ND<1.0	ND<10	ND<10	ND<1.0	ND<1.0	ND<10	ND<10	ND<1.0	ND<1.0
Naphthalene	10	734	490	1,180	657	328	301	267	134	202	89.9	133	128

Table 2 (Continued)
Groundwater VOC Data Summary
EPA Method 8260 STARS
Former Sunoco Station
181 Delaware Avenue
Buffalo, NY

Compounds	NYDEC GW Quality Standard	MW7				MW10			
		6/25/2012	9/11/2012	12/13/2012	3/11/2013	6/25/2012	9/11/2012	12/13/2012	3/11/2013
Benzene	1	ND<10	ND<5.0	ND<0.50	ND	2.8	1.3	0.85	ND
n-Butylbenzene	5	ND<100	ND<50	6.7	7.2	12.8	15.9	ND<5.0	6.6
sec-Butylbenzene	5	ND<100	ND<50	ND<5.0	ND	8.1	9.9	ND<5.0	ND
tert-Butylbenzene	5	ND<100	ND<50	ND<5.0	ND	ND<5.0	ND<5.0	ND<5.0	ND
Ethylbenzene	5	21.8	54.9	20.5	10.0	315	564	250	196
Isopropylbenzene	5	ND<100	ND<50	ND<5.0	ND	62.4	76.8	24.3	25.9
p-Isopropyltoluene	5	ND<100	ND<50	ND<5.0	ND	ND<5.0	5.5	ND<5.0	ND
n-Propylbenzene	5	ND<100	ND<50	8.0	ND	115	160	41.4	45.3
Toluene	5	60.6	40.1	4.1	2.3	26.6	51.2	44.1	39.1
1,2,4-Trimethylbenzene	5	727	602	216	225	6.8	53.5	7.7	6.0
1,3,5-Trimethylbenzene	5	544	312	102	128	5.5	36.8	18.3	24.1
Total Xylenes	10	5,810	2,660	645	578	329	449	316	285
Total NYSDEC STARS VOCs	-	7,163.4	3,669	1,002.3	950.5	884.0	1,423.9	702.7	628.0
<i>Total BTEX</i>	-	<i>5,892.4</i>	<i>2,755</i>	<i>669.6</i>	<i>590.3</i>	<i>673.4</i>	<i>1,065.5</i>	<i>611</i>	<i>520</i>
MTBE	10	ND<20	ND<10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Naphthalene	10	305	135	55.7	21.3	119	241	77.2	136

Notes:

Class GA criteria obtained from Division of Water Technical and Operational Guidance Series June 1998, 1999 Errata Sheet, and 2000 and 2004 Addendum

ND = Non-Detect

Results presented in micrograms per liter (ug/l) or parts per billion (ppb).

Shading indicates compound exceeds Class GA criteria

Table 2 (Continued)
Groundwater VOC Data Summary
EPA Method 8260 STARS
Former Sunoco Station
181 Delaware Avenue
Buffalo, NY

Compounds	NYDEC GW Quality Standard	MW11				MW12			
		6/25/2012	9/11/2012	12/13/2012	3/11/2013	6/25/2012	9/11/2012	12/13/2012	3/11/2013
Benzene	1	1.1	0.80	ND<0.50	ND	ND<5.0	ND<5.0	0.71	ND
n-Butylbenzene	5	ND<5.0	ND<5.0	ND<5.0	ND	ND<50	ND<50	25.7	ND
sec-Butylbenzene	5	ND<5.0	ND<5.0	ND<5.0	ND	ND<50	ND<50	8.8	ND
tert-Butylbenzene	5	ND<5.0	ND<5.0	ND<5.0	ND	ND<50	ND<50	ND<5.0	ND
Ethylbenzene	5	67.8	97.1	45.7	15.5	654	672	796	677
Isopropylbenzene	5	ND<5.0	5.9	ND<5.0	ND	51.0	51.2	61.2	ND
p-Isopropyltoluene	5	ND<5.0	ND<5.0	ND<5.0	ND	ND<50	ND<50	11.3	ND
n-Propylbenzene	5	8.3	11.4	ND<5.0	ND	103	105	126	85.4
Toluene	5	10.8	7.5	6.3	3.7	856	935	814	715
1,2,4-Trimethylbenzene	5	114	159	70.0	28.3	1,090	1,010	1,190	1,150
1,3,5-Trimethylbenzene	5	33.3	27.0	15.8	16.5	239	181	148	199
Total Xylenes	10	262	186	152	57	3,460	2,760	2,420	2,350
Total NYSDEC STARS VOCs	-	497.3	494.7	289.8	121.1	6,453.0	5,714.2	5,601.71	5,176.40
<i>Total BTEX</i>	-	<i>341.7</i>	<i>291.4</i>	<i>204</i>	<i>76</i>	<i>4,970</i>	<i>4,367</i>	<i>4,030.71</i>	<i>3,742.00</i>
MTBE	10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<10	ND<10	ND<1.0	ND<1.0
Naphthalene	10	34.6	58.1	38.1	32.8	320	318	285	377

Notes:

Class GA criteria obtained from Division of Water Technical and Operational Guidance Series June 1998, 1999 Errata Sheet, and 2000 and 2004 Addendum

ND = Non-Detect

Results presented in micrograms per liter (ug/l) or parts per billion (ppb).

Shading indicates compound exceeds Class GA criteria

Table 3
Dissolved Oxygen Data Summary (mg/L)
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Date	Description	Injection Points																									Average		
		IP1	IP2	IP3	IP4	IP5	IP6	IP7	IP8	IP9	IP10	IP11	IP12	IP13	IP14	IP15	IP16	IP17	IP18	IP19	IP20	IP21	IP22	IP23	IP24	IP25		IP26	IP27
10/13/2011	Baseline	16.9	3.1	5.0	4.2	1.8	2.8	2.1	4.9	11.6	2.4	11.9	5.0	5.4	6.2	12.7	4.2	3.8	11.9	5.1	5.7	16.7	5.3	6.0	4.5	6.0	6.3	6.3	6.6
10/20/2011	30 SCFH @ 10 min/hr/bank	28.9	26.1	12.6	25.9	26.5	33.0	30.1	25.0	26.4	21.5	30.0	28.1	20.4	25.0	28.1	9.8	23.6	27.6	26.1	24.7	28.0	25.9	27.0	22.8	25.8	23.0	18.4	24.8
10/28/2011	30 SCFH @ 10 min/hr/bank	35.7	42.1	22.4	36.7	36.5	27.8	42.9	35.8	27.8	44.6	38.3	48.6	36.6	-	36.5	22.8	35.9	32.3	40.6	37.7	35.7	36.7	41.6	-	-	32.1	35.0	35.9
11/1/2011	30 SCFH @ 10 min/hr/bank	24.5	28.8	10.4	21.1	26.3	-	25.6	23.5	26.3	23.1	26.9	27.1	24.2	-	26.2	22.2	23.5	26.4	25.3	26.3	26.2	24.5	24.4	-	-	23.7	21.3	24.3
11/4/2011	30 SCFH @ 6 min/hr/bank	28.1	28.4	-	25.0	-	24.2	25.1	23.1	24.6	25.4	26.7	24.8	22.0	-	23.3	23.9	28.8	27.0	25.3	26.1	26.2	26.8	25.5	-	26.1	24.1	25.1	25.5
11/17/2011	30 SCFH @ 6 min/hr/bank	26.8	27.2	10.0	22.0	24.8	26.4	25.8	22.4	25.3	24.7	26.1	26.8	22.7	-	27.6	25.9	26.3	28.7	26.7	26.3	24.7	25.7	24.4	-	-	23.0	21.4	24.7
12/1/2011	30 SCFH @ 6 min/hr/bank	23.9	21.8	8.3	20.1	23.9	26.7	23.6	-	25.4	22.4	28.4	23.7	20.6	25.1	27.6	20.8	23.2	28.1	21.9	26.3	26.9	20.8	22.6	24.1	24.2	26.1	19.1	23.3
12/19/2011	30 SCFH @ 6 min/hr/bank	25.0	28.8	7.2	22.8	23.7	27.2	23.2	22.3	28.0	21.5	-	22.1	21.0	23.8	32.7	17.0	25.1	-	23.7	25.2	28.9	22.9	22.5	-	21.3	18.9	22.5	23.2
1/5/2012	30 SCFH @ 6 min/hr/bank	26.9	28.6	12.5	28.5	28.8	29.6	29.1	26.1	26.4	26.0	28.7	28.3	24.7	29.7	29.1	27.2	25.0	32.1	26.3	30.1	25.7	23.2	25.8	23.2	24.0	24.7	19.6	26.3
2/28/2012	25-35 SCFH @ 6-8 min/hr/bank	26.4	27.5	5.6	23.4	27.0	30.8	21.5	21.6	-	24.2	29.7	30.5	19.7	23.9	31.0	18.3	25.2	-	-	28.0	23.1	17.7	15.4	20.8	17.1	21.6	21.2	23.0
3/26/2012	25-35 SCFH @ 6-8 min/hr/bank	27.9	31.6	29.2	19.3	28.8	26.8	20.0	22.4	-	18.0	28.5	30.5	13.5	22.7	29.1	21.9	29.4	31.6	-	29.4	25.5	29.9	25.8	23.1	14.7	22.5	24.4	25.1
4/27/2012	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/29/2012	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/25/2012	25-35 SCFH @ 6-8 min/hr/bank	28.0	27.0	19.0	22.6	23.6	24.9	22.4	28.0	-	21.2	-	21.0	24.0	20.0	24.0	19.5	27.8	-	25.8	22.0	-	26.4	26.2	23.7	23.0	24.0	23.9	23.8
7/17/2012	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/9/2012	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/11/2012	25-35 SCFH @ 6-8 min/hr/bank	24.3	27.0	19.5	21.5	21.0	26.0	24.3	-	21.0	25.4	26.5	23.0	26.0	-	23.0	22.0	23.3	23.6	22.9	25.5	24.8	23.5	24.1	21.0	22.4	24.4	23.7	
10/8/2012	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/8/2012	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/13/2012	25-35 SCFH @ 6-8 min/hr/bank	23.7	23.0	8.8	20.0	14.9	25.2	24.1	24.6	-	23.3	-	25.3	23.2	23.1	-	19.7	22.3	-	21.6	23.1	-	22.6	22.0	24.4	22.1	21.2	23.8	21.9
1/2/2013	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/21/2013	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/4/2013	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/18/2013	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/11/2013	25-35 SCFH @ 6-8 min/hr/bank	27.0	29.7	8.7	20.0	25.0	-	24.0	24.0	-	22.0	29.0	-	24.1	24.0	-	17.0	26.0	-	-	26.0	25.0	23.0	26.0	25.0	21.0	21.0	22.0	23.3
3/28/2013	25-35 SCFH @ 6-8 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Monitoring Wells												
MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1	Average	
1.7	1.8	3.4	1.1	2.0	2.1	2.1	-	-	1.6	1.7	1.9	
5.9	3.7	8.3	3.9	2.8	8.0	10.5	-	12.8	2.1	1.4	5.9	
7.6	7.8	18.4	7.9	3.5	26.7	22.9	-	7.4	2.5	4.8	11.0	
4.4	9.7	14.2	4.4	2.6	12.8	13.3	-	7.1	2.8	4.4	7.6	
5.8	7.3	15.7	8.9	5.4	13.2	12.9	-	8.5	2.4	3.6	8.4	
4.7	4.0	13.1	6.8	2.0	15.7	11.0	-	7.9	3.3	2.2	7.1	
4.3	3.9	13.8	7.1	3.3	9.3	6.9	-	2.8	5.8	4.7	6.2	
5.2	2.6	18.2	4.5	4.0	11.5	4.9	-	7.5	2.1	4.2	6.5	
4.8	2.8	24.8	11.3	3.6	13.9	3.7	-	18.0	4.7	3.0	9.1	
4.6	3.3	2.1	14.9	4.0	3.0	3.0	-	15.0	3.1	4.5	5.7	
5.1	4.1	18.6	14.6	5.3	4.2	6.6	-	11.1	7.2	4.7	8.2	
3.8	4.3	17.3	17.9	2.2	9.5	4.4	-	17.1	3.0	-	8.8	
3.9	3.5	9.0	12.4	2.6	16.4	8.9	-	5.1	2.7	2.6	6.7	
7.0	4.8	14.8	12.0	4.0	12.0	8.5	3.9	10.0	8.7	3.2	8.1	
5.5	2.8	20.2	6.5	1.9	11.1	10.2	-	3.7	1.8	-	7.1	
4.4	2.0	13.7	9.2	2.2	10.2	5.7	-	2.9	1.8	-	5.8	
5.4	4.3	14.7	16.6	5.6	9.8	8.3	2.3	7.3	3.6	3.8	7.4	
4.9	4.8	20.2	8.7	2.7	13.9	7.2	-	14.0	2.5	-	8.8	
6.9	5.9	22.0	14.0	3.2	3.1	5.3	-	9.2	3.2	-	8.1	
6.4	6.2	16.6	13.0	5.7	7.8	7.6	4.8	3.5	6.3	3.4	7.4	
2.5	3.5	-	17.9	1.9	-	-	-	17.6	2.6	2.9	7.0	
5.1	4.5	-	16.8	8.6	3.8	9.2	-	19.8	8.2	6.8	9.2	
5.4	9.4	21.0	19.3	3.9	4.0	-	-	-	4.8	-	9.7	
6.5	9.5	21.0	1.5	3.0	3.1	-	-	9.1	6.2	8.9	7.6	
4.2	7.5	7.1	18.5	6.0	7.6	10.2	5.3	14.7	7.1	5.5	8.5	
5.4	6.6	23.0	18.4	1.8	2.9	8.0	-	20.5	1.5	-	9.8	

Table 4
Oxidation Reduction Potential Data Summary (mV)
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Date	Description	Injection Points																									Average		
		IP1	IP2	IP3	IP4	IP5	IP6	IP7	IP8	IP9	IP10	IP11	IP12	IP13	IP14	IP15	IP16	IP17	IP18	IP19	IP20	IP21	IP22	IP23	IP24	IP25		IP26	IP27
10/13/2011	Baseline	130	97	127	150	123	135	78	91	96	89	103	77	39	42	82	113	153	58	35	58	140	106	51	40	97	120	55	92
10/20/2011	30 SCFH @ 10 min/hr/bank	231	239	257	266	263	269	273	271	229	173	262	190	122	158	171	184	190	196	209	214	221	226	232	236	238	243	247	223
10/28/2011	30 SCFH @ 10 min/hr/bank	256	254	261	261	255	250	272	279	247	259	258	266	276	-	253	285	276	256	280	286	293	260	297	-	-	301	287	270
11/1/2011	30 SCFH @ 10 min/hr/bank	140	170	183	198	202	-	213	222	327	228	329	235	239	-	328	242	188	329	245	248	330	253	257	-	-	331	324	250
11/4/2011	30 SCFH @ 6 min/hr/bank	245	248	-	256	-	270	285	286	261	292	261	122	156	-	268	140	202	260	122	180	267	200	204	-	235	282	268	231
11/17/2011	30 SCFH @ 6 min/hr/bank	281	251	271	264	269	270	258	270	275	289	282	281	300	-	289	234	249	295	268	277	308	284	274	-	291	292	276	
12/1/2011	30 SCFH @ 6 min/hr/bank	151	223	234	220	229	225	233	-	239	216	232	219	111	252	235	230	234	236	240	239	237	242	243	256	216	210	207	223
12/19/2011	30 SCFH @ 6 min/hr/bank	252	245	251	256	262	240	261	264	253	279	-	278	276	277	224	250	260	-	267	256	243	255	257	-	199	186	200	250
1/5/2012	30 SCFH @ 6 min/hr/bank	227	220	243	217	221	230	231	234	231	237	227	239	240	243	233	246	251	234	241	248	213	249	251	213	253	240	211	234
2/28/2012	25-35 SCFH @ 6-8 min/hr/bank	191	203	181	223	230	172	236	239	-	245	243	248	250	145	169	123	148	-	-	93	144	158	170	174	213	209	208	192
3/26/2012	25-35 SCFH @ 6-8 min/hr/bank	183	181	185	141	191	1																						

Table 5
Organic Vapor Meter Reading Summary (ppm)
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Date	Description	Monitoring Wells										
		MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1
10/13/2011	Baseline	-	-	-	-	-	-	-	-	-	-	-
10/20/2011	30 SCFH @ 10 min/hr/bank	-	-	-	-	-	-	-	-	-	-	-
10/28/2011	30 SCFH @ 10 min/hr/bank	-	366	-	-	-	-	-	-	-	-	-
11/1/2011	30 SCFH @ 10 min/hr/bank	-	500+	-	-	-	-	-	-	-	-	-
11/4/2011	30 SCFH @ 6 min/hr/bank	57	500+	500+	500+	99	500+	500+	-	10	500+	-
11/17/2011	30 SCFH @ 6 min/hr/bank	30	92	144	146	109	167	241	-	32	122	181
12/1/2011	30 SCFH @ 6 min/hr/bank	57	349	662	1,100	29	728	694	-	98	623	89
12/19/2011	30 SCFH @ 6 min/hr/bank	26	152	324	375	17	362	409	-	44	268	-
1/5/2012	30 SCFH @ 6 min/hr/bank	ND	ND	46	23	ND	ND	ND	-	ND	ND	ND
2/28/2012	25-35 SCFH @6-8 min/hr/bank	1	158	243	472	41	230	189	-	6	210	12
3/26/2012	25-35 SCFH @6-8 min/hr/bank	ND	208	7	188	1	172	180	-	12	66	12
4/27/2012	25-35 SCFH @6-8 min/hr/bank	ND	96	110	195	ND	163	161	-	14	194	-
5/29/2012	25-35 SCFH @6-8 min/hr/bank	1.6	340	310	670	113	500	957	-	7	800	14
6/25/2012	25-35 SCFH @6-8 min/hr/bank	0.3	1000+	497	1000+	48	1000+	1000+	ND	56	1,000+	62
7/17/2012	25-35 SCFH @6-8 min/hr/bank	7	273	800	672	347	1000	500	-	137	1,300	-
8/9/2012	25-35 SCFH @6-8 min/hr/bank	3.4	336	160	825	369	543	900+	-	235	1,020	-
9/11/2012	25-35 SCFH @6-8 min/hr/bank	0.2	189	100	382	114	209	114	9	160	304	-
10/8/2012	25-35 SCFH @6-8 min/hr/bank	2.8	546	300	1,400	65	1200	853	-	213	2,000+	-
11/8/2012	25-35 SCFH @6-8 min/hr/bank	ND	251	110	550	27	189	253	-	72	940	-
12/13/2012	25-35 SCFH @6-8 min/hr/bank	2	231	258	398	27	515	139	-	108	673	-
1/2/2013	25-35 SCFH @6-8 min/hr/bank	ND	780	-	677	43	-	-	-	17	1,300	-
2/4/2013	25-35 SCFH @6-8 min/hr/bank	1.1	800	276	100	38	561	-	-	-	1,000+	-
3/11/2013	25-35 SCFH @6-8 min/hr/bank	10	939	110	817	28	340	90	-	19	647	-

Vapor Monitoring Points			
VP1	VP2	VP3	VP4
0.5	0.5	0.5	1.6
ND	ND	24*	ND
3	1.8	20*	6
ND	ND	16	5
ND	-	ND	4.2
9	12	18	43
-	3	5	12
ND	-	ND	ND
-	-	ND	3
ND	-	-	-
ND	ND	ND	ND
-	-	ND	ND
ND	-	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
-	-	-	-
-	-	-	-
-	-	ND	ND
-	-	-	-
-	-	-	-
-	-	-	-

*VOCs likely due to recent paving around VP3

Table 6
Percent Oxygen Summary (%)
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Date	Description	Monitoring Wells										
		MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1
11/1/2011	30 SCFH @ 10 min/hr/bank	-	20.9	-	-	-	-	-	-	-	-	-
11/4/2011	30 SCFH @ 6 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	-	20.9	20.9	20.9
11/16/2011	30 SCFH @ 6 min/hr/bank	21.6	22.4	20.9	20.9	20.9	20.9	20.9	-	22	22.8	20.9
12/1/2011	30 SCFH @ 6 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	-	20.9	20.9	20.9
12/19/2011	30 SCFH @ 6 min/hr/bank	20.9	-	20.9	20.9	20.9	20.9	20.9	-	20.9	20.9	-
3/26/2012	25-35 SCFH @6-8 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	-	20.9	20.9	20.9
4/27/2012	25-35 SCFH @6-8 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	-	20.9	20.9	20.9
5/29/2012	25-35 SCFH @6-8 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	-	20.9	20.9	20.9
6/25/2012	25-35 SCFH @6-8 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
9/11/2012	25-35 SCFH @6-8 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
2/18/2013	25-35 SCFH @6-8 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
3/28/2013	25-35 SCFH @6-8 min/hr/bank	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9

Vapor Monitoring Points			
VP1	VP2	VP3	VP4
20.9	20.9	20.9	20.9
22.7	-	22.2	21.2
-	-	-	-
-	20.9	21.2	20.9
20.9	-	20.9	20.9
20.9	20.9	20.9	20.9
-	-	-	-
20.9	20.9	20.9	20.9
20.9	-	20.9	20.9
20.9	-	20.9	20.9
-	-	-	-
-	-	-	-

Table 7

**System Operation Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York**

System Compressor Run Hours						
Date	Run Time (Hours)	Total Run Hours/Period	Operational Efficiency	Cumulative Hours	Hours/Day For Period	Operational Notes
10/14/2011	31209	-	100%	0	-	Start up - Run Cycle @ 10 Min Injections
10/20/2011	31334	125	100%	125	20.8	
10/28/2011	31433	99	100%	224	12.4	
11/1/2011	31481	48	100%	272	12.0	Reduced Run Cycle to 6 Min Injections
11/4/2011	31509	28	100%	300	9.3	
11/16/2011	31614	105	100%	405	8.8	
12/1/2011	31743	129	100%	534	8.6	
12/19/2011	31939	196	100%	730	10.9	
1/20/2012	32441	502	100%	1232	15.7	
2/3/2012	32697	256	100%	1488	18.3	Modified System (See * Below)
2/28/2012	33139	442	100%	1930	17.7	
3/26/2012	33536	397	100%	2327	14.7	
4/4/2012	33656	120	100%	2447	13.3	
4/27/2012	34016	360	100%	2807	15.7	
5/14/2012	34277	261	100%	3068	15.4	
5/29/2012	34583	306	100%	3374	20.4	
6/11/2012	34774	191	100%	3565	14.7	
6/25/2012	35056	282	100%	3847	20.1	
7/3/2012	35208	152	100%	3999	19.0	
7/17/2012	35509	301	100%	4300	21.5	
8/9/2012	36001	492	100%	4792	21.4	
8/22/2012	36238	237	100%	5029	18.2	
9/11/2012	36634	396	100%	5425	19.8	
9/24/2012	36895	261	100%	5686	20.1	
10/8/2012	37178	283	100%	5969	20.2	
10/22/2012	37450	272	100%	6241	19.4	
11/8/2012	37784	334	100%	6575	19.6	
11/30/2012	38225	441	100%	7016	20.0	
12/13/2012	38483	258	100%	7274	1.7	
12/27/2012	38682	199	100%	7473	14.2	
1/2/2013	38789	107	100%	7580	17.8	
1/21/2013	38931	142	100%	7722	7.5	
2/4/2013	39075	144	100%	7866	10.3	
2/18/2013	39250	175	100%	8041	12.5	
3/11/2013	39460	210	100%	8251	10.0	
3/28/2013	39598	138	100%	8389	8.1	

*Injection point banks set as follows: IPs 1, 2, 3, 4, 7, 8 and 10: Bank 1; IPs 5, 6, 9, 11, 15 and 18: Bank 2; IPs 12, 13, 14, 16, 17, 19, 20: Bank 3; IPs 21, 22, 23, 24, 25, 26 and 27: Bank4. Prior to leaving the site, IP banks 1, 2 and 4 were set to 6 minute injection intervals; IP bank 3 was set to 8 minute injection intervals; IPs 1 through 24 were set to flow at 30 SCFH; IPs 25 and 26 were set to 25 SCFH; and IP27 was set to 35 SCFH.

CHARTS

APPENDIX A





APPENDIX B

Matrix Environmental Technologies Inc.
Oxygen Injection System, U.S. Patent No. 5,874,001
Design Parameters - Dissolved Oxygen Saturation

Dalton's Law of Partial Pressures

Total pressure = \sum partial pressures

η	moles
MW	Molecular weight (g/mol)
ρ	density (g/L)
p_g	partial pressure of gas (atm)
K_H	Henry's constant (atm)
C_e	Concentration of gas in liquid (mg/L)
x	mole fraction of gas in liquid
p_g	= (total pressure) X (% of gas in mixture)
K_H	= p_g / C_e Henry's Law
x	= $C_e = p_g / K_H = \eta_g / (\eta_g + \eta_{H_2O})$
p (atm)	= $[p$ (psi) + 14.7] / 14.7

Constants for Water (H₂O)

MW	18 g/mol
ρ	1,000 g/L
η	$\rho \cdot V / MW$ mol/L (from universal gas law)

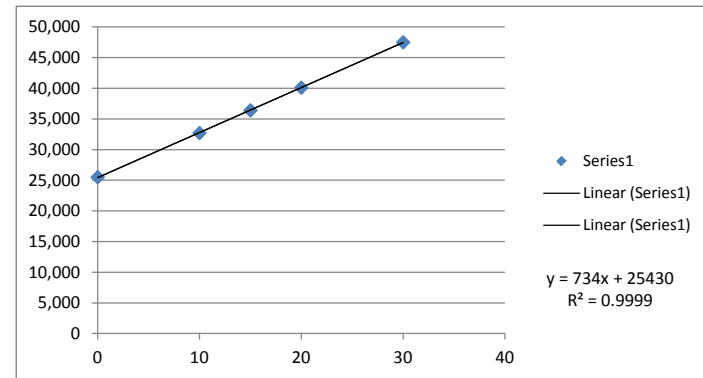
Constants for Oxygen (O₂)

MW	32 g/mol
K_H (0 °C)	25,500 atm
K_H (10 °C)	32,700 atm
K_H (15 °C)	36,400 atm
K_H (20 °C)	40,100 atm
K_H (30 °C)	47,500 atm

temp	K_H
0	25,500
10	32,700
15	36,400
20	40,100
30	47,500

DO solubility (mg/L) with 90% oxygen gas

Depth (ftw)	10 °C	15 °C	20 °C
5	31.6	28.4	25.8
10	35.7	32.0	29.1
15	39.7	35.7	32.4
20	43.8	39.4	35.7
25	47.9	43.0	39.0
30	52.0	46.7	42.4
35	56.0	50.3	45.7
40	60.1	54.0	49.0
45	64.2	57.7	52.3
50	68.3	61.3	55.7



Matrix Environmental Technologies Inc.

Oxygen Injection System, U.S. Patent No. 5,874,001

Design Parameters - Dissolved Oxygen Saturation (Cont.)

Calculations: 12°C

O₂ purity **83.0% ENTER**
Depth (ft) **17.0 ENTER depth of injection below water table (top of screen)**
p (psi) 7.4
p (atm) 1.5
T (°C) **12 ENTER groundwater temperature**
p_g (O₂) 1.25 atm
x 3.64E-05 select KH for actual temperature
η (H₂O) 55.6 mol/L for 1 L
η (O₂) 2.02E-03 mol/L
C_e (O₂) 36.4 mg/L

Calculations: 24°C

O₂ purity **83.0% ENTER**
Depth (ft) **17.0 ENTER depth of injection below water table (top of screen)**
p (psi) 7.4
p (atm) 1.5
T (°C) **24 ENTER groundwater temperature**
p_g (O₂) 1.25 atm
x 2.90E-05 select KH for actual temperature
η (H₂O) 55.6 mol/L for 1 L
η (O₂) 1.61E-03 mol/L
C_e (O₂) 29.0 mg/L

Matrix Environmental Technologies Inc.
Oxygen Injection System, U.S. Patent No. 5,874,001
Design Parameters - System Oxygen Production Capacity

O2 Production Rate SCFH

Primary (PSA) Oxygen Storage Tank

$pV=nRT$

R 48.29 ft-lbf/lbm-°R

T 530 °R (70 °F)

V gallons tank volume

V 8.02 ft3 tank volume

O2 density 12.08 ft3/lbm

p pressure lbs/in2

n mass O2 lbm

$p/n = 22.16$

$V_{oxy} = 12.08 * n$ ft3 O2 volume in tank

$n = V_{oxy}/12.08$

$p/V_{oxy} = 1.83$

p = Enter HIGH pressure in O2 storage tank

Voxy = 33 ft3 O2 in primary (PSA) storage tank

Time to fill tank 25 minutes

Matrix Environmental Technologies Inc.
Oxygen Injection System, U.S. Patent No. 5,874,001
Design Parameters - March 2012 Operating Parameters

	Bank 1	Bank 2	Bank 3	Bank 4	Total	System Capacity
# of injection points	6	6	7	7	26	
O2 flow rate (SCFH)	30	30	30	35		
Duration of injection (min)	6	6	6	8		
O2 volume per injection (ft3)	18.0	18.0	21.0	32.7	57.0	60.0 ft3/hr
injections per day	8	8	8	8		
Total O2 output (ft3/day)	144	144	168	261	717	1,440 ft3/day

*Bank 4 O2 flow rates vary from 25-35 SCFH. Tabulated data presents a maximum calculation.

AirSep PSA Model	O2 Production (SCFH)	Maximum O2 Output (SCFH) @ 75% O2 Production	Maximum O2 Output (CF/day) @ 75% O2 Production	Maximum O2 Injection Pressure (PSI)	O2 Receiver Volume (Gallons)	O2 Receiver Volume (CF)
REGENOX	80	60	1,440	60	60	8.02

APPENDIX C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

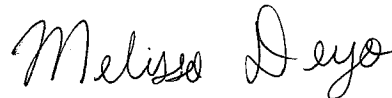
TestAmerica Job ID: 480-35136-1

Client Project/Site: 181 Delaware/Sunoco/10-043

For:

Matrix Environmental Technologies Inc
3730 California Road
PO BOX 427
Orchard Park, New York 14127

Attn: Dave Kreinheder



Authorized for release by:
4/9/2013 2:19:17 PM

Melissa Deyo
Project Manager I
melissa.deyo@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Matrix Environmental Technologies Inc
Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
b	Result Detected in the Unseeded Control blank (USB).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
♠	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Matrix Environmental Technologies Inc
Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Job ID: 480-35136-1

Laboratory: TestAmerica Buffalo

Narrative

**Job Narrative
480-35136-1**

Receipt

The samples were received on 3/28/2013 9:46 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

General Chemistry

Method SM 5210B: For batch 109790, the dilution water Dissolved Oxygen depletion was greater than 0.2 mg/L but less than the reporting limit of 2.0 mg/L. The associated sample results are reported.

No other analytical or quality issues were noted.

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Detection Summary

Client: Matrix Environmental Technologies Inc
 Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Client Sample ID: MW1R

Lab Sample ID: 480-35136-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Heterotrophic Plate Count	2200		1		CFU/mL	1		SM 9215B	Total/NA
Nitrate	0.70		0.050	0.020	mg/L	1		353.2	Total/NA
Total Phosphorus	0.46		0.010	0.0050	mg/L	1		SM 4500 P E	Total/NA
Biochemical Oxygen Demand	7.1	b	2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: MW4

Lab Sample ID: 480-35136-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Heterotrophic Plate Count	5900		1		CFU/mL	1		SM 9215B	Total/NA
Ammonia	0.033		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.022	J	0.050	0.020	mg/L	1		353.2	Total/NA
Biochemical Oxygen Demand	29.9	b	2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: MW7

Lab Sample ID: 480-35136-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Heterotrophic Plate Count	11200		1		CFU/mL	1		SM 9215B	Total/NA
Ammonia	0.14		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.054		0.050	0.020	mg/L	1		353.2	Total/NA
Total Phosphorus	0.24		0.010	0.0050	mg/L	1		SM 4500 P E	Total/NA
Biochemical Oxygen Demand	21.1	b	2.0	2.0	mg/L	1		SM 5210B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Matrix Environmental Technologies Inc
 Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Client Sample ID: MW1R
 Date Collected: 03/28/13 08:40
 Date Received: 03/28/13 09:46

Lab Sample ID: 480-35136-1
 Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			03/29/13 14:24	1
Nitrate	0.70		0.050	0.020	mg/L			03/28/13 13:01	1
Nitrite	ND		0.050	0.020	mg/L			03/28/13 13:01	1
Total Phosphorus	0.46		0.010	0.0050	mg/L			03/29/13 16:09	1
Biochemical Oxygen Demand	7.1	b	2.0	2.0	mg/L			03/28/13 12:46	1

Method: SM 9215B - Heterotrophic Plate Count

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heterotrophic Plate Count	2200		1	CFU/mL			03/30/13 15:00	1

Client Sample ID: MW4

Lab Sample ID: 480-35136-2
 Matrix: Water

Date Collected: 03/28/13 08:00
 Date Received: 03/28/13 09:46

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.033		0.020	0.0090	mg/L			03/29/13 14:25	1
Nitrate	0.022	J	0.050	0.020	mg/L			03/28/13 12:39	1
Nitrite	ND		0.050	0.020	mg/L			03/28/13 12:39	1
Total Phosphorus	ND		0.010	0.0050	mg/L			03/29/13 16:09	1
Biochemical Oxygen Demand	29.9	b	2.0	2.0	mg/L			03/28/13 12:46	1

Method: SM 9215B - Heterotrophic Plate Count

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heterotrophic Plate Count	5900		1	CFU/mL			03/30/13 15:00	1

Client Sample ID: MW7

Lab Sample ID: 480-35136-3
 Matrix: Water

Date Collected: 03/28/13 07:30
 Date Received: 03/28/13 09:46

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.14		0.020	0.0090	mg/L			03/29/13 14:26	1
Nitrate	0.054		0.050	0.020	mg/L			03/28/13 13:02	1
Nitrite	ND		0.050	0.020	mg/L			03/28/13 13:02	1
Total Phosphorus	0.24		0.010	0.0050	mg/L			03/29/13 16:09	1
Biochemical Oxygen Demand	21.1	b	2.0	2.0	mg/L			03/28/13 12:46	1

Method: SM 9215B - Heterotrophic Plate Count

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heterotrophic Plate Count	11200		1	CFU/mL			03/30/13 15:00	1

QC Sample Results

Client: Matrix Environmental Technologies Inc
 Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-110022/123
 Matrix: Water
 Analysis Batch: 110022

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			03/29/13 14:10	1

Lab Sample ID: MB 480-110022/99
 Matrix: Water
 Analysis Batch: 110022

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			03/29/13 13:47	1

Lab Sample ID: LCS 480-110022/100
 Matrix: Water
 Analysis Batch: 110022

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.00		mg/L		100	90 - 110

Lab Sample ID: LCS 480-110022/124
 Matrix: Water
 Analysis Batch: 110022

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.01		mg/L		101	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-109743/3
 Matrix: Water
 Analysis Batch: 109743

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			03/28/13 12:54	1

Lab Sample ID: LCS 480-109743/4
 Matrix: Water
 Analysis Batch: 109743

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.58		mg/L		105	90 - 110

Method: SM 4500 P E - Phosphorus

Lab Sample ID: MB 480-110024/27
 Matrix: Water
 Analysis Batch: 110024

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus	ND		0.010	0.0050	mg/L			03/29/13 16:09	1

TestAmerica Buffalo

QC Sample Results

Client: Matrix Environmental Technologies Inc
 Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Method: SM 4500 P E - Phosphorus (Continued)

Lab Sample ID: MB 480-110024/3

Matrix: Water

Analysis Batch: 110024

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus	ND		0.010	0.0050	mg/L			03/29/13 16:09	1

Lab Sample ID: LCS 480-110024/28

Matrix: Water

Analysis Batch: 110024

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus	0.200	0.205		mg/L		102	90 - 110

Lab Sample ID: LCS 480-110024/4

Matrix: Water

Analysis Batch: 110024

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus	0.200	0.187		mg/L		93	90 - 110

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 480-109790/1 USB

Matrix: Water

Analysis Batch: 109790

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			03/28/13 12:46	1

Lab Sample ID: LCS 480-109790/2

Matrix: Water

Analysis Batch: 109790

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	198	205.8		mg/L		104	85 - 115

QC Association Summary

Client: Matrix Environmental Technologies Inc
 Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

General Chemistry

Analysis Batch: 109743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-35136-1	MW1R	Total/NA	Water	353.2	
480-35136-3	MW7	Total/NA	Water	353.2	
LCS 480-109743/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-109743/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 109790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-35136-1	MW1R	Total/NA	Water	SM 5210B	
480-35136-2	MW4	Total/NA	Water	SM 5210B	
480-35136-3	MW7	Total/NA	Water	SM 5210B	
LCS 480-109790/2	Lab Control Sample	Total/NA	Water	SM 5210B	
USB 480-109790/1 USB	Method Blank	Total/NA	Water	SM 5210B	

Analysis Batch: 109800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-35136-1	MW1R	Total/NA	Water	353.2	
480-35136-2	MW4	Total/NA	Water	353.2	
480-35136-3	MW7	Total/NA	Water	353.2	

Analysis Batch: 109801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-35136-2	MW4	Total/NA	Water	353.2	

Analysis Batch: 110022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-35136-1	MW1R	Total/NA	Water	350.1	
480-35136-2	MW4	Total/NA	Water	350.1	
480-35136-3	MW7	Total/NA	Water	350.1	
LCS 480-110022/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-110022/124	Lab Control Sample	Total/NA	Water	350.1	
MB 480-110022/123	Method Blank	Total/NA	Water	350.1	
MB 480-110022/99	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 110024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-35136-1	MW1R	Total/NA	Water	SM 4500 P E	
480-35136-2	MW4	Total/NA	Water	SM 4500 P E	
480-35136-3	MW7	Total/NA	Water	SM 4500 P E	
LCS 480-110024/28	Lab Control Sample	Total/NA	Water	SM 4500 P E	
LCS 480-110024/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
MB 480-110024/27	Method Blank	Total/NA	Water	SM 4500 P E	
MB 480-110024/3	Method Blank	Total/NA	Water	SM 4500 P E	

Biology

Analysis Batch: 111765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-35136-1	MW1R	Total/NA	Water	SM 9215B	
480-35136-2	MW4	Total/NA	Water	SM 9215B	
480-35136-3	MW7	Total/NA	Water	SM 9215B	

TestAmerica Buffalo

Lab Chronicle

Client: Matrix Environmental Technologies Inc
 Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Client Sample ID: MW1R

Lab Sample ID: 480-35136-1

Date Collected: 03/28/13 08:40

Matrix: Water

Date Received: 03/28/13 09:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	109743	03/28/13 13:01	EGN	TAL BUF
Total/NA	Analysis	SM 5210B		1	109790	03/28/13 12:46	ML	TAL BUF
Total/NA	Analysis	353.2		1	109800	03/28/13 13:01	EGN	TAL BUF
Total/NA	Analysis	350.1		1	110022	03/29/13 14:24	KS	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	110024	03/29/13 16:09	KS	TAL BUF
Total/NA	Analysis	SM 9215B		1	111765	03/30/13 15:00	CTB	Biotrax

Client Sample ID: MW4

Lab Sample ID: 480-35136-2

Date Collected: 03/28/13 08:00

Matrix: Water

Date Received: 03/28/13 09:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5210B		1	109790	03/28/13 12:46	ML	TAL BUF
Total/NA	Analysis	353.2		1	109800	03/28/13 12:39	EGN	TAL BUF
Total/NA	Analysis	353.2		1	109801	03/28/13 12:39	EGN	TAL BUF
Total/NA	Analysis	350.1		1	110022	03/29/13 14:25	KS	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	110024	03/29/13 16:09	KS	TAL BUF
Total/NA	Analysis	SM 9215B		1	111765	03/30/13 15:00	CTB	Biotrax

Client Sample ID: MW7

Lab Sample ID: 480-35136-3

Date Collected: 03/28/13 07:30

Matrix: Water

Date Received: 03/28/13 09:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	109743	03/28/13 13:02	EGN	TAL BUF
Total/NA	Analysis	SM 5210B		1	109790	03/28/13 12:46	ML	TAL BUF
Total/NA	Analysis	353.2		1	109800	03/28/13 13:02	EGN	TAL BUF
Total/NA	Analysis	350.1		1	110022	03/29/13 14:26	KS	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	110024	03/29/13 16:09	KS	TAL BUF
Total/NA	Analysis	SM 9215B		1	111765	03/30/13 15:00	CTB	Biotrax

Laboratory References:

Biotrax = Biotrax Testing Lab, Inc, 3580 Harlem Road, Floor 2, Cheektowaga, NY 14215

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Matrix Environmental Technologies Inc
 Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-13 *
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	06-30-13
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-01-13 *
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-13 *
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-13 *
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: Matrix Environmental Technologies Inc
Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Method	Method Description	Protocol	Laboratory
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
SM 4500 P E	Phosphorus	SM	TAL BUF
SM 5210B	BOD, 5-Day	SM	TAL BUF
SM 9215B	Heterotrophic Plate Count	SM	Biotrax
9215B	Heterotrophic Plate Count	SM	Biotrax

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

Biotrax = Biotrax Testing Lab, Inc, 3580 Harlem Road, Floor 2, Cheektowaga, NY 14215

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



Sample Summary

Client: Matrix Environmental Technologies Inc
Project/Site: 181 Delaware/Sunoco/10-043

TestAmerica Job ID: 480-35136-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-35136-1	MW1R	Water	03/28/13 08:40	03/28/13 09:46
480-35136-2	MW4	Water	03/28/13 08:00	03/28/13 09:46
480-35136-3	MW7	Water	03/28/13 07:30	03/28/13 09:46

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Biotrax Testing Laboratory
 3580 Harlem Road
 Cheektowaga NY 14215

Certificate of Analysis

Date	Project #	Analyst
3/28/2013	6221	EL

Name / Address
Test America, Inc 10 Hazelwood Drive Amherst, NY 14228 Attn:Sally Hoffman

Customer Fax	Total Pages
	1

Account #	
-----------	--

Project Rec'd	Time
3/28/2013	1410

Project ID	480-35136-1
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**Laboratory Analysis Report
Trade Secret**

Test	Analytical Method & Analyte	Results / Units	Analysis Date
SPC Water	Standard Plate Count Potable/Non-Potable Water Method- SM 18 9215B MDL (<1 to >100,000 CFU/ ml) Location.....MW1R (480-35136-1) Date and Time Sampled3-28-2013 0840 Date and Time Plated3-28-2013 1430	2200 CFU/ ml	3-30-2013 1500
SPC Water	Standard Plate Count Potable/Non-Potable Water Method- SM 18 9215B MDL (<1 to >100,000 CFU/ ml) Location.....MW4 480-35136-2 Date and Time Sampled3-28-2013 0800 Date and Time Plated3-28-2013 1430	5900 CFU/ ml	3-30-2013 1500
SPC Water	Standard Plate Count Potable/Non-Potable Water Method- SM 18 9215B MDL (<1 to >100,000 CFU/ ml) Location.....MW7 Date and Time Sampled3-28-2013 0730 Date and Time Plated3-28-2013 1430	11200 CFU/ ml	3-30-2013 1500

This report is issued under the authority of the analysts listed above. This report only relates to the samples which was tested. Interpretation of these results is the sole responsibility of the client. This report shall not be reproduced except in full, without the written approval of the laboratory
 NYSDOH and NELAC ID 11660



P.J.L.A. Testing
 ISO 17025:2005
 Accreditation
 #73827

All work is complete!

Edward J. Lukaczek

Phone #	Fax #	edward@biotrax.net
716-651-0146	716-242-3010	E-mail Page 14 of 16

Reviewed By _____

TestAmerica

Temperature on Receipt _____

THE LEADER IN ENVIRONMENTAL TESTING

Drinking Water? Yes No

Chain of Custody Record

TAL-4124 (1007)

Client: **Matrix Environmental** Project Manager: **Steve Conchick** Date: **3-28-13** Chain of Custody Number: **237784**
 Address: **3730 California Road** Telephone Number (Area Code/Fax Number): **516-162-0745** Lab Number: _____ of _____
 City: **Orchard Park NY** State: **NY** Zip Code: **14127** Site Contact: **D. K. Keast** Lab Contact: _____

Project Name and Location (State): **Site - 181 Delaware Ave, Buffalo, NY** Carner/Maybill Number: _____
 Contract/Purchase Order/Quote No.: **10-043**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives						Special Instructions/ Conditions of Receipt		
			Air	Aqueous	Soil	Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc			
01416	3-28-13	8:40	X	X	X	X	X	X	X	X	X	X	X	Heptachlor Plate Count
01404	↓	8:00	X	X	X	X	X	X	X	X	X	X	X	BCD Total Phosphorus
01417	↓	7:30	X	X	X	X	X	X	X	X	X	X	X	

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison-B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify): _____

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

1. Relinquished By: **[Signature]** Date: **3-28-13 9:46** Time: _____
 2. Relinquished By: **[Signature]** Date: _____ Time: _____
 3. Relinquished By: _____ Date: _____ Time: _____

Received By: **[Signature]** Date: **3/28/13** Time: **09:16**
 Received By: _____ Date: _____ Time: _____
 Received By: _____ Date: _____ Time: _____

Comments: **2, 4, 6, 1**



Login Sample Receipt Checklist

Client: Matrix Environmental Technologies Inc

Job Number: 480-35136-1

Login Number: 35136

List Source: TestAmerica Buffalo

List Number: 1

Creator: Janish, Carl

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	MATRIX
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Technical Report for

Sunoco

MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY

10-043

Accutest Job Number: MC18853

Sampling Date: 03/11/13

Report to:

**Matrix Environmental
3730 California Road
Orchard Park, NY 14127
hakers@matrixbiotech.com**

ATTN: Holly Akers

Total number of pages in report: 20



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.



**Reza Pand
Lab Director**

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) ISO 17025:2005 (L2235)

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Test results relate only to samples analyzed.

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Sample Summary

Sunoco

Job No: MC18853

MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY
 Project No: 10-043

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
MC18853-1	03/11/13	09:00 DK	03/13/13	AQ	Ground Water	MW1R
MC18853-2	03/11/13	08:45 DK	03/13/13	AQ	Ground Water	MW2
MC18853-3	03/11/13	09:10 DK	03/13/13	AQ	Ground Water	MW3
MC18853-4	03/11/13	08:40 DK	03/13/13	AQ	Ground Water	MW4
MC18853-5	03/11/13	07:40 DK	03/13/13	AQ	Ground Water	MW5
MC18853-6	03/11/13	07:20 DK	03/13/13	AQ	Ground Water	MW6
MC18853-7	03/11/13	07:00 DK	03/13/13	AQ	Ground Water	MW7
MC18853-8	03/11/13	06:40 DK	03/13/13	AQ	Ground Water	MW10
MC18853-9	03/11/13	08:00 DK	03/13/13	AQ	Ground Water	MW11
MC18853-10	03/11/13	08:20 DK	03/13/13	AQ	Ground Water	MW12

Summary of Hits

Job Number: MC18853
Account: Sunoco
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY
Collected: 03/11/13

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
MC18853-1	MW1R					
		Ethylbenzene	3.5	1.0	ug/l	SW846 8260B
		Naphthalene	14.0	5.0	ug/l	SW846 8260B
		n-Propylbenzene	7.1	5.0	ug/l	SW846 8260B
		Toluene	4.4	1.0	ug/l	SW846 8260B
		1,2,4-Trimethylbenzene	111	5.0	ug/l	SW846 8260B
		1,3,5-Trimethylbenzene	51.3	5.0	ug/l	SW846 8260B
		m,p-Xylene	42.7	1.0	ug/l	SW846 8260B
		o-Xylene	20.8	1.0	ug/l	SW846 8260B
		Xylene (total)	63.5	1.0	ug/l	SW846 8260B
MC18853-2	MW2					
		n-Butylbenzene	9.6	5.0	ug/l	SW846 8260B
		Ethylbenzene	1.0	1.0	ug/l	SW846 8260B
		Toluene	2.0	1.0	ug/l	SW846 8260B
		1,2,4-Trimethylbenzene	40.4	5.0	ug/l	SW846 8260B
		1,3,5-Trimethylbenzene	21.5	5.0	ug/l	SW846 8260B
		m,p-Xylene	10.7	1.0	ug/l	SW846 8260B
		o-Xylene	2.2	1.0	ug/l	SW846 8260B
		Xylene (total)	12.9	1.0	ug/l	SW846 8260B
MC18853-3	MW3					
		Ethylbenzene	573	20	ug/l	SW846 8260B
		Naphthalene	274	100	ug/l	SW846 8260B
		1,2,4-Trimethylbenzene	977	100	ug/l	SW846 8260B
		1,3,5-Trimethylbenzene	284	100	ug/l	SW846 8260B
		m,p-Xylene	3340	20	ug/l	SW846 8260B
		o-Xylene	214	20	ug/l	SW846 8260B
		Xylene (total)	3560	20	ug/l	SW846 8260B
MC18853-4	MW4					
		n-Butylbenzene	384	250	ug/l	SW846 8260B
		Ethylbenzene	403	50	ug/l	SW846 8260B
		Naphthalene	657	250	ug/l	SW846 8260B
		Toluene	108	50	ug/l	SW846 8260B
		1,2,4-Trimethylbenzene	3910	250	ug/l	SW846 8260B
		1,3,5-Trimethylbenzene	1380	250	ug/l	SW846 8260B
		m,p-Xylene	4680	50	ug/l	SW846 8260B
		o-Xylene	838	50	ug/l	SW846 8260B
		Xylene (total)	5510	50	ug/l	SW846 8260B

Summary of Hits

Job Number: MC18853
Account: Sunoco
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY
Collected: 03/11/13

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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MC18853-5 MW5

Ethylbenzene	535	10	ug/l	SW846 8260B
Naphthalene	134	50	ug/l	SW846 8260B
n-Propylbenzene	61.9	50	ug/l	SW846 8260B
Toluene	491	10	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	518	50	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	76.0	50	ug/l	SW846 8260B
m,p-Xylene	1030	10	ug/l	SW846 8260B
o-Xylene	223	10	ug/l	SW846 8260B
Xylene (total)	1260	10	ug/l	SW846 8260B

MC18853-6 MW6

Ethylbenzene	18.4	10	ug/l	SW846 8260B
Naphthalene	128	50	ug/l	SW846 8260B
Toluene	384	10	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	521	50	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	223	50	ug/l	SW846 8260B
m,p-Xylene	2050	10	ug/l	SW846 8260B
o-Xylene	1290	10	ug/l	SW846 8260B
Xylene (total)	3330	10	ug/l	SW846 8260B

MC18853-7 MW7

n-Butylbenzene	7.2	5.0	ug/l	SW846 8260B
Ethylbenzene	10.0	1.0	ug/l	SW846 8260B
Naphthalene	21.3	5.0	ug/l	SW846 8260B
Toluene	2.3	1.0	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	225	5.0	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	128	5.0	ug/l	SW846 8260B
m,p-Xylene	382	1.0	ug/l	SW846 8260B
o-Xylene	196	1.0	ug/l	SW846 8260B
Xylene (total)	578	1.0	ug/l	SW846 8260B

MC18853-8 MW10

n-Butylbenzene	6.6	5.0	ug/l	SW846 8260B
Ethylbenzene	196	1.0	ug/l	SW846 8260B
Isopropylbenzene	25.9	5.0	ug/l	SW846 8260B
Naphthalene	136	5.0	ug/l	SW846 8260B
n-Propylbenzene	45.3	5.0	ug/l	SW846 8260B
Toluene	39.1	1.0	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	6.0	5.0	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	24.1	5.0	ug/l	SW846 8260B

Summary of Hits

Job Number: MC18853
Account: Sunoco
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY
Collected: 03/11/13

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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m,p-Xylene		267	1.0		ug/l	SW846 8260B
o-Xylene		17.7	1.0		ug/l	SW846 8260B
Xylene (total)		285	1.0		ug/l	SW846 8260B

MC18853-9 MW11

Ethylbenzene		15.5	1.0		ug/l	SW846 8260B
Naphthalene		32.8	5.0		ug/l	SW846 8260B
Toluene		3.7	1.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		28.3	5.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		16.5	5.0		ug/l	SW846 8260B
m,p-Xylene		47.8	1.0		ug/l	SW846 8260B
o-Xylene		9.2	1.0		ug/l	SW846 8260B
Xylene (total)		57.1	1.0		ug/l	SW846 8260B

MC18853-10 MW12

Ethylbenzene		677	10		ug/l	SW846 8260B
Naphthalene		377	50		ug/l	SW846 8260B
n-Propylbenzene		85.4	50		ug/l	SW846 8260B
Toluene		715	10		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		1150	50		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		199	50		ug/l	SW846 8260B
m,p-Xylene		1910	10		ug/l	SW846 8260B
o-Xylene		446	10		ug/l	SW846 8260B
Xylene (total)		2350	10		ug/l	SW846 8260B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW1R		
Lab Sample ID: MC18853-1		Date Sampled: 03/11/13
Matrix: AQ - Ground Water		Date Received: 03/13/13
Method: SW846 8260B		Percent Solids: n/a
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L71776.D	1	03/15/13	TT	n/a	n/a	MSL3375
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	3.5	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	14.0	5.0	ug/l	
103-65-1	n-Propylbenzene	7.1	5.0	ug/l	
108-88-3	Toluene	4.4	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	111	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	51.3	5.0	ug/l	
	m,p-Xylene	42.7	1.0	ug/l	
95-47-6	o-Xylene	20.8	1.0	ug/l	
1330-20-7	Xylene (total)	63.5	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID: MW2		
Lab Sample ID: MC18853-2		Date Sampled: 03/11/13
Matrix: AQ - Ground Water		Date Received: 03/13/13
Method: SW846 8260B		Percent Solids: n/a
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L71777.D	1	03/15/13	TT	n/a	n/a	MSL3375
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	9.6	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	1.0	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
108-88-3	Toluene	2.0	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	40.4	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	21.5	5.0	ug/l	
	m,p-Xylene	10.7	1.0	ug/l	
95-47-6	o-Xylene	2.2	1.0	ug/l	
1330-20-7	Xylene (total)	12.9	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	103%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW3		Date Sampled: 03/11/13
Lab Sample ID: MC18853-3		Date Received: 03/13/13
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L71778.D	20	03/15/13	TT	n/a	n/a	MSL3375
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	10	ug/l	
104-51-8	n-Butylbenzene	ND	100	ug/l	
135-98-8	sec-Butylbenzene	ND	100	ug/l	
98-06-6	tert-Butylbenzene	ND	100	ug/l	
100-41-4	Ethylbenzene	573	20	ug/l	
98-82-8	Isopropylbenzene	ND	100	ug/l	
99-87-6	p-Isopropyltoluene	ND	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	20	ug/l	
91-20-3	Naphthalene	274	100	ug/l	
103-65-1	n-Propylbenzene	ND	100	ug/l	
108-88-3	Toluene	ND	20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	977	100	ug/l	
108-67-8	1,3,5-Trimethylbenzene	284	100	ug/l	
	m,p-Xylene	3340	20	ug/l	
95-47-6	o-Xylene	214	20	ug/l	
1330-20-7	Xylene (total)	3560	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW4		Date Sampled: 03/11/13
Lab Sample ID: MC18853-4		Date Received: 03/13/13
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L71779.D	50	03/15/13	TT	n/a	n/a	MSL3375
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	25	ug/l	
104-51-8	n-Butylbenzene	384	250	ug/l	
135-98-8	sec-Butylbenzene	ND	250	ug/l	
98-06-6	tert-Butylbenzene	ND	250	ug/l	
100-41-4	Ethylbenzene	403	50	ug/l	
98-82-8	Isopropylbenzene	ND	250	ug/l	
99-87-6	p-Isopropyltoluene	ND	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	50	ug/l	
91-20-3	Naphthalene	657	250	ug/l	
103-65-1	n-Propylbenzene	ND	250	ug/l	
108-88-3	Toluene	108	50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	3910	250	ug/l	
108-67-8	1,3,5-Trimethylbenzene	1380	250	ug/l	
	m,p-Xylene	4680	50	ug/l	
95-47-6	o-Xylene	838	50	ug/l	
1330-20-7	Xylene (total)	5510	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

3.5
3

Client Sample ID: MW5		
Lab Sample ID: MC18853-5		Date Sampled: 03/11/13
Matrix: AQ - Ground Water		Date Received: 03/13/13
Method: SW846 8260B		Percent Solids: n/a
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L71780.D	10	03/15/13	TT	n/a	n/a	MSL3375
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	50	ug/l	
135-98-8	sec-Butylbenzene	ND	50	ug/l	
98-06-6	tert-Butylbenzene	ND	50	ug/l	
100-41-4	Ethylbenzene	535	10	ug/l	
98-82-8	Isopropylbenzene	ND	50	ug/l	
99-87-6	p-Isopropyltoluene	ND	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	ug/l	
91-20-3	Naphthalene	134	50	ug/l	
103-65-1	n-Propylbenzene	61.9	50	ug/l	
108-88-3	Toluene	491	10	ug/l	
95-63-6	1,2,4-Trimethylbenzene	518	50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	76.0	50	ug/l	
	m,p-Xylene	1030	10	ug/l	
95-47-6	o-Xylene	223	10	ug/l	
1330-20-7	Xylene (total)	1260	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW6		
Lab Sample ID: MC18853-6		Date Sampled: 03/11/13
Matrix: AQ - Ground Water		Date Received: 03/13/13
Method: SW846 8260B		Percent Solids: n/a
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L71781.D	10	03/15/13	TT	n/a	n/a	MSL3375
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	50	ug/l	
135-98-8	sec-Butylbenzene	ND	50	ug/l	
98-06-6	tert-Butylbenzene	ND	50	ug/l	
100-41-4	Ethylbenzene	18.4	10	ug/l	
98-82-8	Isopropylbenzene	ND	50	ug/l	
99-87-6	p-Isopropyltoluene	ND	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	ug/l	
91-20-3	Naphthalene	128	50	ug/l	
103-65-1	n-Propylbenzene	ND	50	ug/l	
108-88-3	Toluene	384	10	ug/l	
95-63-6	1,2,4-Trimethylbenzene	521	50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	223	50	ug/l	
	m,p-Xylene	2050	10	ug/l	
95-47-6	o-Xylene	1290	10	ug/l	
1330-20-7	Xylene (total)	3330	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW7		
Lab Sample ID: MC18853-7		Date Sampled: 03/11/13
Matrix: AQ - Ground Water		Date Received: 03/13/13
Method: SW846 8260B		Percent Solids: n/a
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V16340.D	1	03/15/13	AMY	n/a	n/a	MSV654
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	7.2	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	10.0	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	21.3	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
108-88-3	Toluene	2.3	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	225	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	128	5.0	ug/l	
	m,p-Xylene	382	1.0	ug/l	
95-47-6	o-Xylene	196	1.0	ug/l	
1330-20-7	Xylene (total)	578	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	103%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW10		
Lab Sample ID: MC18853-8		Date Sampled: 03/11/13
Matrix: AQ - Ground Water		Date Received: 03/13/13
Method: SW846 8260B		Percent Solids: n/a
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V16341.D	1	03/15/13	AMY	n/a	n/a	MSV654
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	6.6	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	196	1.0	ug/l	
98-82-8	Isopropylbenzene	25.9	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	136	5.0	ug/l	
103-65-1	n-Propylbenzene	45.3	5.0	ug/l	
108-88-3	Toluene	39.1	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	6.0	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	24.1	5.0	ug/l	
	m,p-Xylene	267	1.0	ug/l	
95-47-6	o-Xylene	17.7	1.0	ug/l	
1330-20-7	Xylene (total)	285	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW11		
Lab Sample ID: MC18853-9		Date Sampled: 03/11/13
Matrix: AQ - Ground Water		Date Received: 03/13/13
Method: SW846 8260B		Percent Solids: n/a
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V16342.D	1	03/15/13	AMY	n/a	n/a	MSV654
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	15.5	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	32.8	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
108-88-3	Toluene	3.7	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	28.3	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	16.5	5.0	ug/l	
	m,p-Xylene	47.8	1.0	ug/l	
95-47-6	o-Xylene	9.2	1.0	ug/l	
1330-20-7	Xylene (total)	57.1	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW12		
Lab Sample ID: MC18853-10		Date Sampled: 03/11/13
Matrix: AQ - Ground Water		Date Received: 03/13/13
Method: SW846 8260B		Percent Solids: n/a
Project: MATNYOP:DUNS#00001289 181 Delaware Ave. Buffalo, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V16343.D	10	03/15/13	AMY	n/a	n/a	MSV654
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	50	ug/l	
135-98-8	sec-Butylbenzene	ND	50	ug/l	
98-06-6	tert-Butylbenzene	ND	50	ug/l	
100-41-4	Ethylbenzene	677	10	ug/l	
98-82-8	Isopropylbenzene	ND	50	ug/l	
99-87-6	p-Isopropyltoluene	ND	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	ug/l	
91-20-3	Naphthalene	377	50	ug/l	
103-65-1	n-Propylbenzene	85.4	50	ug/l	
108-88-3	Toluene	715	10	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1150	50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	199	50	ug/l	
	m,p-Xylene	1910	10	ug/l	
95-47-6	o-Xylene	446	10	ug/l	
1330-20-7	Xylene (total)	2350	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FED-EX Tracking # _____
Accutest Quote # _____
Bottle Order Control # _____
Accutest Job # **MC18853**

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)				Matrix Codes													
Company Name Matrix Environmental		Project Name Sen-H Exchange Sta 181 Delaware		Requested Analysis (see TEST CODE sheet)				Matrix Codes DW - Drinking Water GW - Ground Water VW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank													
Street Address 3730 California Road		Street Delaware Ave. Exchange																			
City, State, Zip Orchard Park, NY 14677		City Buffalo		Requested Analysis (see TEST CODE sheet)				Matrix Codes													
Billing Information (If different from Report to)		Company Name																			
Project Contact Steve Marchetti		Project # 10-043		Requested Analysis (see TEST CODE sheet)				Matrix Codes													
Phone # 716-662-0745		Client PO# 39																			
Sampler(s) Name(s) David Kreinheder		Project Manager Steve Marchetti		Requested Analysis (see TEST CODE sheet)				Matrix Codes													
Field ID / Point of Collection		MEQ/DI Val #																			
Sample #	Field ID / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	HCl	NO ₃	NO ₂	NO ₃	NO ₂	NO ₃	NO ₂	NO ₃	NO ₂	NO ₃	NO ₂	NO ₃	NO ₂	LAB USE ONLY	
-1	MW1B	3-11-13	9:00	D/K	GW	2															
-2	MW2		8:45																		
-3	MW3		9:10																		
-4	MW4		8:40																		
-5	MW5		7:40																		
-6	MW6		7:20																		
-7	MW7		7:00																		
-8	MW10		6:40																		
-9	MW11		8:00																		
-10	MW12		8:20																		164

Turnaround Time (Business days)		Approved By (Accutest PM) / Date:		Data Deliverable Information				Comments / Special Instructions	
<input checked="" type="checkbox"/> 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY				<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> NYASP Category A <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NYASP Category B <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> State Forms <input type="checkbox"/> CT RCP <input type="checkbox"/> EDD Format <input type="checkbox"/> MA MCP <input type="checkbox"/> Other _____ Commercial "A" = Results Only Commercial "B" = Results + QC Summary				DUNS # 0000-1289	

Sample Custody must be documented below each time samples change possession, including courier delivery.										
Relinquished by: [Signature]	Date/Time: 7/12/13	Received by: [Signature]	Date/Time: 7/12/13	Relinquished by: [Signature]	Date/Time: 7/12/13	Received by: [Signature]	Date/Time: 7/12/13	Relinquished by: [Signature]	Date/Time: 7/12/13	Received by: [Signature]
3		3		4		4		5		5
Custody Seal #		<input type="checkbox"/> Intact		Preserved where applicable		<input type="checkbox"/> On Ice		Cooler Temp.		
		<input type="checkbox"/> Not Intact				<input checked="" type="checkbox"/> 10°				

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC18853 **Client:** MATRIX **Immediate Client Services Action Required:** No
Date / Time Received: 3/13/2013 **Delivery Method:** _____ **Client Service Action Required at Login:** No
Project: SUN 181 DELAWARE **No. Coolers:** 1 **Airbill #'s:** _____

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	Infrared gun		
3. Cooler media:	Ice (bag)		

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

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